



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 16, Number 4

May 2007

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FAAC Clear Sky Clocks

by Greg Ozimek

Looking up! We do a lot of it, we do it automatically when we are outside or near a window. As amateur astronomers we are probably more aware of the condition of the sky, day or night, than most of our neighbors, friends, and co-workers.

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The Ions of Dawn

by Patrick L. Barry

This summer, NASA will launch a probe bound for two unexplored worlds in our solar system's asteroid belt—giant asteroids Ceres and Vesta. The probe, called Dawn, will orbit first one body and then the other in a never-before-attempted maneuver.

It has never been attempted, in part, because this mission would be virtually impossible with conventional propulsion. "Even if we were just going to go to Vesta, we would need one of the largest rockets that the U.S. has to carry all that propellant," says Marc Rayman, Project System Engineer for Dawn at JPL. Traveling to both worlds in one mission would require an even bigger rocket.

This is a trip that calls for the unconventional. "We're using ion propulsion," says Rayman.

The ion engines for the Dawn spacecraft proved themselves aboard an earlier, experimental mission known as Deep Space 1 (DS1). Because ion propulsion is a relatively new technology that's very different from conventional rockets, it was a perfect candidate for DS1, a part of NASA's New Millennium Program, which flight-tests new technologies so that missions such as Dawn can use those technologies reliably.

"The fact that those same engines are now making the Dawn mission possible shows that New Millennium accomplished what it set out to do," Rayman says.

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STAR STUFF

MAY 2007 - Vol. 16 - No. 5

STAR STUFF is published eleven times each year by the

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PRESIDENT:	Don Klaser
VICE PRESIDENT:	Doug Bauer
SECRETARY:	Ken Anderson
TREASURER:	Gordon Hansen
NEWSLETTER EDITOR:	Dale Ochalek

CLUB INFORMATION

The Ford Amateur Astronomy Club (FAAC) meets on the fourth Thursday each month, except for the combined November/December meeting on the first Thursday of December – at Henry Ford Community College, Administrative Services and Conference Center in Dearborn. Refer to our website for a map and directions (www.boonhill.net/faac).

The FAAC observes at Spring Mill Pond within the Island Lake State Recreation Area near Brighton, Michigan. The club maintains an after-hours permit, and observes on Friday and Saturday nights, and nights before holidays, weather permitting. The FAAC also has use of the dark skies at Richmond Airport, Unadilla, given prior permission. See the FAAC Yahoo Group* for more information.

Observing schedules and additional info are available on our website, or via the FAAC Yahoo Group.* Or call the **FAAC Hotline**, for info, and leave a message, or ask questions: **248-207-2075**. Or send email inquiries to fordastronomy@comcast.net.

Membership in the FAAC is open to anyone with an interest in amateur astronomy. The FAAC is an affiliate of the Ford Employees Recreation Association (F.E.R.A.). Membership fees:

Annual – New Member:	\$30	(\$15 after July 1)
Annual – Renewal:	\$25	(\$30 after January 31)

Membership includes the *STAR STUFF* newsletter, discounts on magazines, discounts at selected area equipment retailers, and after-hours access to the Island Lake observing site.

ASTRONOMY or SKY & TELESCOPE MAGAZINE DISCOUNTS

Obtain the required form from the FAAC club treasurer for a \$10 discount. Send the completed form directly to the respective publisher with your subscription request and payment. Do not send any money directly to the FAAC for this.

STAR STUFF NEWSLETTER SUBMISSIONS

Your submissions to *STAR STUFF* are more than welcome! Send your story and/or images to the editor at dake00k@yahoo.com. Email text or MS Word is fine. *STAR STUFF* will usually go to press the weekend prior to each general meeting. Submissions received prior to that weekend can be included in that issue.

* FAAC Members are welcome to join our **FordAstronomyClub** Yahoo! Group. Messages, photos, files, online discussions, and more! URL: groups.yahoo.com/group/FordAstronomyClub.

Be a Presenter...

President's Corner

Don Klaser, President, FAAC

One of the most enjoyable parts of my job as President is setting up the schedule of speakers for the Tech Talks and Main Presentations for each meeting. Whether I have direct contact with the prospective speaker, or someone else gives me a lead to another person, I'm always amazed by the wide variety of topics these individuals have! The depth of research that they have put into their talks is outstanding; who would think that they are "amateurs"?

And the subject matter seems to be infinite. Telescopes - big and small, astrophotography, selenography, stellar evolution, relativity, measuring distance by ancient methods, 3-D space travel, double stars, planetary transits, comets, binocular observing and collimation and my personal favorite - The Calendar and Western Culture (ok – just kidding, that was me)!

If you'd like to join this group, please let me know by e-mail at dklaser4750@wowway.com or by phone: 586-596-9510.

I hope to hear from you soon!

Clear Sky Clock... *(continued from page 1)*

We've become used to 'Looking Up' into the sky but we also 'Look Up' when we want to pre-determine our observing schedule within the next 48 hours. Without a second thought, we look up the Clear Sky Clock at www.ClearDarkSky.com to get a real heads-up on sky conditions.

The Clear Sky Clock has become an essential research tool for us FAAC sky-gazers. We rely on it as much as we rely on a clean eyepiece and a finder scope, and as much as our SIG Astrophotographers rely on solid state image sensors and Photoshop.

As a way of further encouraging and also saying thanks to the software author, the aggregator of the complex weather data and weather models, Mr. Attila Danko, I proposed that we as a group, help support Mr. Danko's tireless efforts and bandwidth costs by making a monetary contribution.

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Ions of Dawn... *(continued from page 1)*

Ion engines work on a principle different from conventional rockets. A normal rocket engine burns a chemical fuel to produce thrust. An ion engine doesn't burn anything; a strong electric field in the engine propels charged atoms such as xenon to very high speed. The thrust produced is tiny—roughly equivalent to the weight of a piece of paper—but over time, it can generate as much speed as a conventional rocket while using only about 1/10 as much propellant.

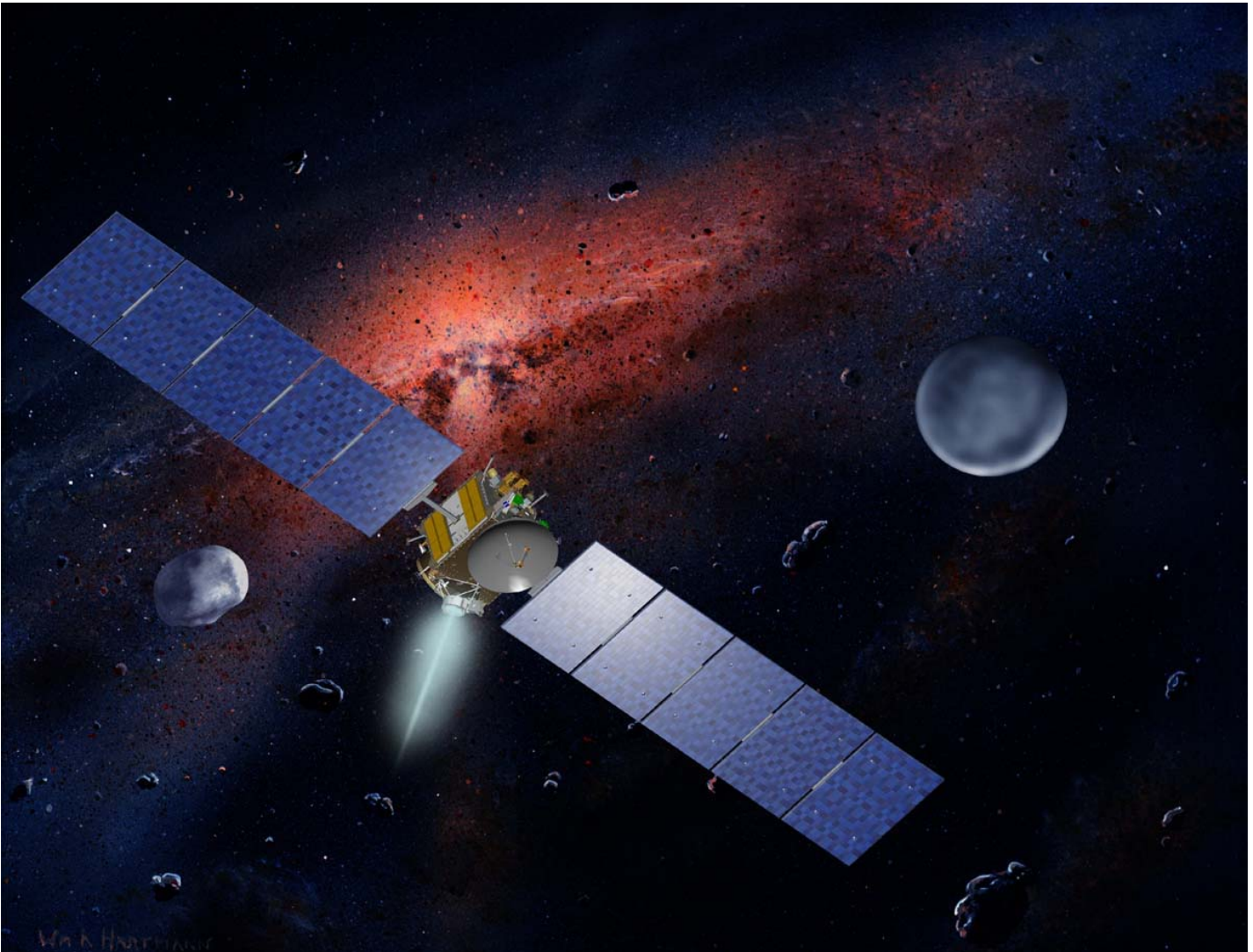
And Dawn will need lots of propulsion. It must first climb into Vesta's orbit, which is tilted about 7 degrees from the plane of the solar system. After studying Vesta, it will have to escape its gravity and maneuver to insert itself in an orbit around Ceres—the first spacecraft to orbit two distant bodies. Dawn's up-close views of these

worlds will help scientists understand the early solar system.

"They're remnants from the time the planets were being formed," Rayman says. "They have preserved a record of the conditions at the dawn of the solar system."

Find out about other New Millennium Program validated technologies and how they are being used in science missions at <http://nmp/TECHNOLOGY/infusion.html>. Or, download the "Professor Starr's Dream Trip," about how ion propulsion made a dream of visiting the asteroids come true. Children's version <http://spaceplace.nasa.gov/en/kids/nmp/starr>.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Artist's rendering of Dawn spacecraft, with asteroids. Largest are Vesta and Ceres. Credits: Dawn spacecraft — Orbital Sciences Corporation; background art—William K. Hartmann, courtesy UCLA.

Clear Sky Clock... *(continued from page 2)*

After researching this possibility I found that other clubs and individuals are also helping to support www.ClearDarkSky.com as sponsors. Sponsors are eligible for recognition by having their logo placed on their favorite Clear Sky Clock web page.

During the April Board Meeting I presented my findings and noted that \$50 would keep our logo on one Clear Sky Clock header for one year.

A check for \$150 was sent and, as of early April, 2007 our FAAC logo and club identification has been appearing on the top left corner of the FAAC observing sites: Lake Erie Metro Park, Richmond Air Field, and Island Lake (Spring Mill Pond). Our logo will be up until April, 2008.

It is my hope that as long as the website www.ClearDarkSky.com remains a viable and an essential tool for us, that FAAC supports the real efforts and the real bandwidth costs of another amateur astronomer whose efforts are a true service to our community.

An update: As of May 15th, 2007, each day, Sponsored clocks are now being updated by about 12:30pm EDT and the rest by 2pm EDT.

So, fellow amateur astronomers, take your browser out for a spin - see our proud FAAC sponsorship of these Clear Sky Clocks:

<http://cleardarksky.com/c/LkErMtPkMIkey.html>,
or [/RchAFMIkey.html](http://cleardarksky.com/c/RchAFMIkey.html), or [/SprngMIIsPMIkey.html](http://cleardarksky.com/c/SprngMIIsPMIkey.html)

Sky & Telescope Renewal

Club members can now renew their Sky & Telescope subscriptions directly via mail or phone - no club renewal form. Just mail in the renewal notices with payment, or renew via phone at 800-253-0245 (outside US 386-597-4277). Payment at the time of renewal is required. The current club subscription price is \$32.95/year.

New subscribers must contact Gordon Hansen and provide a check payable to SKY Publishing to receive the discount.

Note: The club is now required to validate yearly all members who subscribe. Keep your membership current! -- Gordon Hansen

April 26 Meeting Minutes

Ken Anderson

Attendance: 33+

Meeting officially started at 5:30 pm with pizza and pop available, in the Hackett conference room of the HFCC Health Careers Building. Don Klaser, President, chaired the meeting and led the introductions, and asked for observations.

Will Sopha reported his naked eye observing from Mauna Kea, Hawaii. Ken Anderson showed Aurora's Girl Scout Troop the Moon, Venus, Saturn, and M45 in his 17.5" Dobsonian, 25x100 and smaller binoculars. George Korody was at Kensington's Nature Center and received public comments about the Moon and Venus. Jon Blum and Gordon Hansen have been taking advantage of Richmond airfield for observing. Dave Wright and Dennis Salliotte showed us all how to find Venus naked eye around noon at the Detroit Science Center for Astronomy Day.

Dale Ochalek had extra paper copies of Star Stuff. Don Klaser passed out the following awards:

Event Program Coordinator / Outreach – Ken Anderson, Tom Blazak, Tony Licata, Dale Ochalek, and Dennis Salliotte. Community Outreach – Doug Baurer, Steve Harvath, and Harold Thomason. Meeting Presentation – Dale Partin and Gary Strumolo.

John Schroer from the Detroit Science Center (DSC) gave an impromptu Tech Talk about the discovery of an Earth-like planet. The European Southern Observatory (ESO) discovered it using the radio velocity technique. Stars wobble around a barycenter, and from this they can back out planet size, orbit, and velocity. This planet is very close to its parent star, orbiting every 13 days! The parent star is Gliese 581C in Libra about 120,000 miles away from us. They estimate the temperature of the new planet is between 0 and 100 degrees C, and hence this is the first extra solar planet that may have liquid water. There are three planets in this new solar system, one is the size of Jupiter, one is the size of Uranus or Neptune, and the Earth-like one has twice the diameter of our home planet.

John also talked about the Orion six-person spaceship proposal to go from the Moon to Mars. NASA plans to use Ariane 5 rocket ships to go to the moon to build a lunar base/space station.

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Meeting Minutes... *(continued from page 4)*

Dale Partin, from the Warren Astronomical Society, gave the main presentation entitled, "Extraterrestrial Intelligence – Three Views". Dale started out with a essay he wrote entitled, "Things I Used to Know," reflecting on his past beliefs as a kid to the present.

Physics, astronomy, and chemistry are tied together in that the three most abundant elements in the universe are hydrogen (H), helium (He), and oxygen (O). Liquids are believed to be essential for life to start; especially water (H₂O), and possibly methane (CH₄) or ammonia (NH₃). On Earth everything has carbon (C) based DNA; but extraterrestrials may also have silicon (Si) or boron (B) options, which are the next elements on the periodic table.

Speculative science claims there are multiple universes. Extreme biology believes in evolution, and survival of the fittest. Search for Extra-Terrestrial Intelligence (SETI) is still conducting searches for evidence of life beyond our home planet. UFOs and science fiction also add to the interest in this topic.

Dale summarized being able to find evidence of extra-terrestrial life as "not certain," so just enjoy this topic about established physics.

Extra Solar Planet Searches usually are based on Doppler shift due to stellar wobble. The Doppler shift is blue (shorter wavelength) when incoming, and red (longer wavelength) when outgoing. Therefore we can infer the planet's existence based on its effect on the parent star. All the finds (prior to the Earthlike discovery above) have been very massive planets that are very close to the star. There is also the transit technique for discovering planets, which is based on the lucky/rare alignment of the planet passing in front of the star for either an eclipse or occultation, marked by a temporary drop in magnitude,

Habitable zones around stars are circular orbits, with eccentricity near zero. This allows liquid water to be dominant (oceans, seas, lakes, rivers, etc.), and minimizes freezing ice (at the poles) or boiling vapor (clouds). Most planets have highly elliptical orbits, with eccentricities much greater than zero (but not exceeding one, which would collapse the ellipse into a line segment containing the two foci). Highly elliptical orbits may boil

water when too close to the sun, or freeze all the water when too far away from the sun.

Next Dale showed an example of orbital fit for HD89744. The Y-axis was velocity of star to earth, and the X-axis showed the 256 earth day phase with upside down parabolas in series. This planet had seven times the mass of Jupiter, and eccentricity of 0.7, and a semi-major axis of 0.9 Astronomical Units (AU).

The latest Doppler technology is good to +/- 1 meter/second (m/s). For Jupiter our sun wobbles +/- 12 m/s (over Jupiter's 11.86 sidereal years) so this could be detected. Saturn's effect wobbles our sun +/- 2.7 m/s (over 29.46 sidereal years) so this could also be detected. But the Earth only wobbles our sun +/- 0.09 m/s (less than 1 m/s) over our year so this would not be detected by aliens using our current technology.

For rocky/terrestrial-like planets to survive, there is also a habitable zone for the galaxy, where the parent star is in a relatively peaceful orbit with no other close stars. This region is not in the galaxy nucleus where star density is very large, with too many stars in very eccentric orbits, destabilizing all nearby stars. It is also not in the spiral arms, since the arms rotate at a different rate than the stars. Very far away from the galaxy has low metal content, so any planets found here would likely be gas planets. Therefore, the most likely region to find terrestrial like planets is at the co-rotation distance, between the spiral arms. Our Solar System is about 2/3 of the way out from the Milky Way galaxy's core between its' spiral arms, meeting this requirement for Earth to exist.

The first extra solar planet was discovered in 1989. A maximum of 34 were discovered in 2003. In a histogram plot, a maximum of 104 planets had their parent star mass 0.814 time that of our sun. Almost 25% of stars with planets have high metallicity (iron/hydrogen ratio) near 0.5, implying many planets have been clobbered by many asteroids and comets. 117 out of 214 planets discovered, have semi-major axis less than 1 AU from their parent star, and 63 had Jupiter like mass, both due to the Doppler technique being the dominant method used.

There are 10-20 times more red dwarf stars than sun-like stars. These would have habitable zones close to their cooler star. M stars flare frequently and badly and would wipe out any life.

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Meeting Minutes... *(continued from page 5)*

The Principle of Mediocrity implies there is nothing special about mankind, and is favored by the SETI Institute. Proof of this is that Earth is not the center of the solar system. The sun is not the center of the galaxy. The Milky Way is not the center of the local group of galaxies. Life started quickly (several million years) after Earth cooled down and became habitable.

The Anthropic Principle believes the universe seems finely tuned for intelligent life and especially life on Earth. Paul Durac in the 1930s and Robert Drake in 1961 said there were "amazing coincidences" and listed hundreds of factors some of which are: laws of physics, fundamental physical constants (example gravitational constant), we are on the edge of the Virgo Super Cluster, habitable zone of the Milky Way, habitable zone of the solar system, outer gas giants shield us from comets (example comet Schumaker –Levi recently impacting Jupiter). However, SETI does have an issue/response, that these statistical arguments do not provide proof that life cannot exist elsewhere.

In 1961 Frank Drake presented his famous equation for the number planets containing intelligent life in our Milky way galaxy based on probabilities and estimates:

$$N = N^* \times f_s \times f_p \times n_e \times f_l \times f_i \times f_c \times f_L$$

where N^* is 400 billion stars in the Milky way, f_s is 10% of stars suitable for life (40 billion), f_p is 25% form planets (10 billion), n_e is number of planets in this solar system ecologically suitable/capability of supporting life (assume 2 for 20 billion), f_l is 25% actually form life (5 billion), f_i is 50% probability of life being intelligent or develops intelligence (2.5 billion), f_c is 100% life develops capability to communicate and develop a technical communicative civilization (2.5 billion), and f_L is the galactic lifetime of this technical civilization.

The pessimistic view postulated by Hugh Ross in 2006 is that we are special. In 1995 he listed 41 factors with 10-31 probability of life. In 2000 he listed 128 factors with 10-144 probability of life. In 2004 he listed 322 factors with 10-282 probability of life. Hence the probability of finding life is decreasing by 10 billion/month. The Drake equation is only for our own Milky Way galaxy.

We live is a sweet spot of the galaxy (co-rotation) therefore we look close by which is a good area to

look. The Milky Way is outside the Virgo cluster of galaxies, therefore we are looking in the right place. Intelligent life may not exist elsewhere in the galaxy. The Drake equation is only for our own Milky Way galaxy. With all the galaxies and most optimistic view, the numbers are constantly declining. Probability of life in the universe is 10-282.

Don Klaser led the business portion. Ken Anderson gave the Secretary's Report. Several club members had corrections to the minutes, found on the web and newsletter, and these corrections are all underlined below in the events section. Gordon Hansen gave the Treasurer's report totaling \$6395, with \$1000 in a six moth Certificate of Deposit (CD). He will purchase another CD in 3 months.

Next Don led the club through events, listed in chronological order, plus reminders at the end:

FAAC Banquet March 24 at Station 885 in Plymouth, recapped. There were 48 signed up. Al Bates put together the slide show. Don Klaser led Astro Jeopardy, designed by Dale Ochalek. Guest Speaker was Dr. Carrie Zaitz, Crestwood/Ensign Planetarium.

Astronomy Day April 21, recapped. At Detroit Science Center with Daytime Solar Viewing, Telescope contest. John Schroer thanked all those who participated (Don Klaser, Ken Anderson, Doug Bauer, Gordon Hansen, Dennis Salliotte, Dave Wright, etc.) and said they average 2700 people per day.

At Kensington Metropark Nature Center – George Korody reported 200 visitors for solar viewing.

At Dearborn Police Dept on Michigan Ave. – Harold Thomason had 30-40 visitors for daytime solar viewing and nighttime observing between 9AM and midnight. He collected \$85 for the fire department.

At Island Lake, Spring Mill Pond Site – John Kirchoff reported a very successful Beginner's Night with 40+ telescopes and the parking lot half full for nighttime observing. John Schroer gave a green laser pointer tour of the constellations.

HFCC Planetarium "Spring Sky" from April 1 to June 19, Tuesdays. Doors open 7:15-7:30 pm – free event. Dennis Salliotte, Eric Rasmussen, and

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Meeting Minutes... *(continued from page 8)*

Bob Clubb presenting. Families, kids, and scouts welcome.

SIG meetings are every second Thursday of each month at HFCC Rosenau conference room.

FAAC Library Open one hour before meeting HFCC Science Center Conference Room 109, per Gary Stahl. List of books is available in FAAC Yahoo site, which can be signed out for one month. John Schroer and the Detroit Science Center (DSC) made a digital library donation.

FAAC Road Trip 2007 to MSU Abrams Planetarium and Observatory June 22, 5:30 pm -1 am. Jim Frisbie is coordinating. Tickets (estimate prices) \$20 Members, \$28 Non-Members. Includes 8 pm Planetarium show, "Search for Life in the Universe", behind the scenes. Open MSU 24" Cassegrain Observatory (weather permitting). Bus transportation with snacks, beverages, and restroom. Pickup location - Ryder's Hobby Shop, 5 Mile Road, Livonia. Sign up details in Star Stuff and yahoo web site. Gordon taking reservations and money. Will open up to other clubs after next meeting.

Gladwin on the hill FAAC Dark Sky Workshop September 5 to 11, being coordinated by Tony Licata. Dark Sky Star Imaging Party/Workshop for club members and families (not public in general). \$5 to camp on hill. Hill is free for those camping in the park. No campers or RV allowed on the hill. Ends a half day before Great Lakes Star Gaze, and must leave hill for lane marking, etc.

Great Lakes Star Glaze is September 14-16 at Gladwin.

GLAAC Astronomy on the Beach is September 21-22, at Kensington Metropark for the general public. Solar observing earlier, 6 pm official start (6:30 pm first show), John Schroer coordinating guest speaker. New this year to encourage equipment setup even with cloudy weather, they will raffle an eyepiece for those who set up. Ms. Andis Harold from Gross Point North High School will be doing radio astronomy.

Mark Deprest will be setting up two portable planetariums. Frank Ancona volunteered to be Meade 4M Club Liaison for the Meade 4M Banner, which entails one written article/month, and

Meade provides equipment for raffle. Greg Ozimek is the Celestron contact and has caps and catalogs for those who would like them. FAAC to donate \$200 and provide sound system, speakers, and microphone (previously rented for \$125). University of Michigan Lowbrows to donate \$300. Detroit Science Center to donate the same as last year. Mars Phoenix Lander. GLAAC Planning Meeting 4/29/07 at Nature Center, contact Bob MacFarland for details or future meetings.

Seeking 2007 speakers for both FAAC 30min-1hr Main Presentations, and 15-20min Tech Talks. Call Don Klaser at 586-596-9510 or dklaser4750@wowway.com.

Harold Thomason volunteered to be Equipment Chairperson, to store and track or log equipment in/out! Jim Frisbie purchased Yamaha Stagepas 300 sound system, and will be evaluating wireless microphone. We also own laptop, projector, and screen for presentations.

We are also seeking a missing Dobsonian telescope believed to be with a previous club officer, since we did not have an equipment policy at the time.

Gordon Hansen said we are considering a new order from Saginaw for sweatshirts, jackets, shirts, and a possible expansion of items. Please contact Gordon if interested.

Greg Ozimek convinced the FAAC board to become \$150 sponsors of the Clear Sky Clock, so we now have our FAAC logo proudly displayed on the Island Lake, Richmond Airfield, and Lake Erie sites. We also have cell phone links to all three sites.

Jim Barnes from South Eastern Michigan Soaring Association (SEMSA) at Richmond Airfield informed us that we no longer require two day advance notice to observe. However they would like to be informed if 10 or more people observe, or plan to observe. Keep track of how many people actually are present and report back. We still plan to have the mid summer picnic July 7th with South Eastern Michigan Soaring Association (SEMSA) at Richmond Airfield, and are looking for volunteers to cook, etc.

The 2007 Calendars (with Whirlpool cover) from Astronomy Magazine are still available for purchase. Cheaper from FAAC than if purchased individually from Astronomy magazine.

Meeting Agenda - May 24

5:30 pm

Opening/Introduction/Member Observing

New Members and Guests – Diane Worth

Tech Talk: TBD

Presentation: "Testing Astronomical Telescope Optics" - Bob Berta - Warren Astronomical Society

Club Business/Secretary/Treasurer reports

Club Projects/Committees/Member support

- Trip to Abrams Planetarium - June 22 - Jim Frisbie
- Astro-Imaging SIC - Gordon Hansen
- SEMSA/FAAC Picnic - Date TBD - Ed Halash
- Trip to Abrams Planetarium - June 22, 2007 - Jim Frisbie
- GLAAC/AOTB - September 21 & 22, 2007 - Bob MacFarland
- Club Wearables Order - Diane/Gordon
- Equipment Chairman - Doug Bauer
- Club Wearables - Gordon Hansen
- Astronomy Day II - September 15 - Don Klaser
- Open discussion - All
- Close - Don Klaser

FAAC Events 2007

Bob MacFarland

June	22 – FAAC Read Trip – MSU Abrams 23 – Beginners' Night, Island Lake Recreation Area
July	21 – Beginners' Night, Island Lake Recreation Area
August	18 – Beginners' Night, Island Lake Recreation Area
September	5-11 – Astro-Imaging Workshop, Gladwin 14-15 – Great Lakes Star Gaze, Gladwin 21-22 – Astronomy on the Beach – GLAAC, Kensington Park
October	20 – Beginner's Night - Island Lake
TBD 2007	– Sand Hill / FAAC Picnic – Detroit Symphony Orchestra night

May 2007

Treasurer's Report

Gordon Hansen

Bank Accounts

Checking	433.24
Savings	4322.13

TOTAL Bank Accounts 4755.37

Cash Accounts

Cash Account	87.97
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TOTAL Cash Accounts 87.97

Asset Accounts

GLAAC	1866.81
Projector	241.95
Scholarship	309.05

TOTAL Asset Accounts 2417.81

Certificates of Deposit 1001.08

OVERALL TOTAL 8262.23

Astro Imaging SIG

Tony Licata

The next meeting of the Astro Imaging SIG is Thursday, June 14th, 2007, 5:30 pm, Roseneau Rooms A-B, at HFCC in Dearborn, in the Administrative Services and Conference Bldg. (same as the FAAC General Meeting). If you drive up to the Faculty parking lot gate, it should open allowing you to park close to the building. Discussion is T.B.D.

Also, mark your calendars! The Dark Sky Workshop is scheduled for Sep 5th-11th, at River Valley RV Camp in Gladwin, MI. A flyer and sign-up sheet will be posted at the Yahoo group site. Hard copies will also be made available at the general meeting.

Items for Sale

Coulter 10" Dobsonian telescope. \$400.
Contact Bob Stonik, 313-361-4954.

Celestron Orange Tube 8" (mid-1970s) Very good condition, no scratches, w/camera mount, tripod. RA bearings, slo-mo Dec fine. Corrector plate needs cleaning; needs visual back, diagonal. Contact Dr. Nicolle Zellner, Albion College
nzellner@albion.edu

Schmidt-Newtonian 10" – F5.35, 1360 mm focal length with 2" focuser. Includes 60 mm guide scope, Full aperture solar filter by Thousand Oaks (Mylar). Also includes cooling fan, extra set of "O" rings. Corrector plate made by Optron systems (division of Nazca Corp. of Callifornia). Also available is the Crestliner mount (on wheels). Scope made by Nelson Lewis of Detroit Astronomical Society in 1962. Purchased 1981. Selling telescope for \$325. Mount for \$200. Contact: Harold Thomason 313-584-7465

AstroSystems 12.5" F5.26 TeleKit Dobsonian, 2" thk 1/15 peak to valley wave front Pegasus primary, new Sky Commander XP4 DSC , AstroSystems Phase IV focuser, 9 x 70 finder, internal filter slide, secondary heater, base mirror fan with 2 boundary layer fans, light shroud, full nylon cover, truss bag, wheelbarrow handles, other extras. \$4400 new, asking \$2150.

Contact Bob, stargzr@wowway.com

Orion Telescopes 8-inch XT8
Very Good Condition
Comes with 6X30 finder, 2 eps 25 & 9mm Dobsonian mounted, great all around Scope!
\$300.00

Contact Michael, 734-777-3605 or email:
mharri1000@netzero.com

Photon 127 5" f9 achromatic refractor 5" f9 achromatic refractor for sale. \$300 OBO.

Contact Clay Kessler, ckessler@gatecom.com.

TEN COMMANDMENTS FOR AMATEUR ASTRONOMERS

- I. THOU SHALT NOT HAVE WHITE LIGHT BEFORE THEE, BEHIND THEE, OR TO THE SIDE OF THEE WHILST SHARING THE NIGHT SKY WITH THY FELLOW STARGAZERS.
 - II. THOU SHALT NOT LOVE THY TELESCOPE MORE THAN THY SPOUSE OR THY CHILDREN; AS MUCH AS, MAYBE, BUT NOT MORE.
 - III. THOU SHALT NOT COVET THY NEIGHBOR'S TELESCOPE, UNLESS IT EXCEEDS IN APERTURE OR ELECTRONICS TWICE THAT OF THY WILDEST DREAMS.
 - IV. THOU SHALT NOT READ "ASTRONOMY" OR "SKY & TELESCOPE" ON COMPANY TIME, FOR THINE EMPLOYER MAKES IT POSSIBLE TO CONTINUE THINE ASTRONOMICAL HOBBY.
 - V. THOU SHALT HAVE AT LEAST TWO TELESCOPES SO AS TO KEEP THY SPOUSE INTERESTED WHEN THE SAME ACCOMPANIES THEE UNDER THE NIGHT SKY OR ON ECLIPSE EXPEDITIONS TO STRANGE LANDS WHERE EXOTIC WILD ANIMALS DOTH ROAM FREELY.
 - VI. THOU SHALT NOT ALLOW EITHER THY SONS OR THY DAUGHTERS TO GET MARRIED DURING THE HOLY DAYS OF STARFEST, WINTER STAR PARTY, OR TEXAS STAR PARTY.
 - VII. THOU SHALT NOT REVEAL TO THY SPOUSE THE TRUE COST OF THY TELESCOPE COLLECTION; ONLY THE INDIVIDUAL COMPONENTS, AND THAT SHALL BE DONE WITH GREAT INFREQUENCY.
 - VIII. THOU SHALT NOT BUY THY SPOUSE ANY LENSES, FILTERS, DEW SHIELDS, MAPS, CHARTS, OR ANY OTHER NECESSITIES FOR CHRISTMAS, ANNIVERSARIES, OR BIRTHDAYS UNLESS THY SPOUSE NEEDS THEM FOR THEIR OWN TELESCOPE.
 - IX. THOU SHALT NOT DECEIVE THY SPOUSE INTO THINKING THAT YE ARE TAKING THEM FOR A ROMANTIC SATURDAY NIGHT DRIVE WHEN INDEED THOU ART HEADING FOR A DARK SKY SITE.
 - X. THOU SHALT NOT STORE THY TELESCOPE IN THY LIVING ROOM, DINING ROOM, OR BEDROOM, LEST THOU BE SLEEPING WITH IT FULL TIME.
- ADDENDA:**
- XI. VERILY, OBSERVE NOT THROUGH THY NEIGHBOR'S AP OR TAK, LEST THEE BE UTTERLY CONSUMED BY THE LUST OF APO FEVER, AND THY BRAIN AND THY BANK ACCOUNT SHALL SHRIVEL AND WITHER LIKE BRANCHES IN A FLAME...
 - XII. VERILY, OBSERVE NOT THROUGH THY NEIGHBOR'S DOB OF GOLIATH, LEST THEE BE LAIN BARE TO THE FIRES OF APERTURE FEVER, AND THY SANITY, THY SACROILIAC AND THY LIFE SAVINGS BE CRUSHED AS YE GRAPES OF WRATH.

– SUBMITTED BY GREG OZIMEK

2006-2007 INCOME SUMMARY STATEMENT

Name of Club:	<u>Ford Amateur Astronomy Club</u>	Name of Treasurer:	Gordon Hansen
		e-mail address/ phone number:	GordonH2006@comcast.net 734-675-6137

Number of Members: **139**

5/1/2006	Beginning Balance	\$ 6,549.70
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INCOME

Calendar Rec	\$	157.00	
Club Merchandise		2,687.66	
Dinner Party Rec	\$	1,498.50	
Dues	\$	3,825.00	
Equipment Fund	\$	343.75	
Gift Received	\$	100.00	
Interest Income	\$	28.67	
Mags subscript necklaces	\$	15.00	
	\$	225.50	
Newsletter Advertising	\$	450.00	
Scholarship Rec	\$	230.45	
Star Party Rec	\$	2,928.25	
Interest Income CD	\$	1.08	
Total Income			\$12,490.86

DISBURSEMENTS

Awards	\$	82.44	
Calendar	\$	161.88	
Club Merchandise	\$	3,672.42	
Dinner Party	\$	1,593.88	
Dues Exp	\$	1.83	
Equipment	\$	571.18	
Food star party	\$	300.00	
Gifts	\$	400.35	
Insurance	\$	320.00	
Library	\$	15.00	
Meeting Expense	\$	811.47	
Miscellaneous	\$	416.84	
Newsletter	\$	120.38	
Office	\$	269.92	
Post Office Box	\$	40.00	
Scholarship Exp	\$	250.00	
Site fees	\$	50.00	
Stamps	\$	1.83	
Star Party	\$	1,215.89	
Supplies	\$	379.48	
			\$ 10,674.79

	Ending Balance	\$8,365.77
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FAAC ROAD TRIP 2007

MSU - Abrams Planetarium & Observatory

Friday, June 22, 2007 5:30 pm - 1:00 am

The Planetarium Show begins at 8:00pm followed by a "Behind the Scenes" look at Planetarium Operation. Weather permitting, we will travel to the MSU Observatory for Open Observing



Ticket Prices Include:

- Planetarium Show:
 - "The Search for Life in the Universe"
 - What's Up Tonight
 - A Behind the Scenes look
 - Open observing at the observatory
 - Bus transportation to and from the MSU Campus in East Lansing.
- (Snacks & Beverages provided, restroom on bus)

Tickets: Members & Family: \$ 20

Non-Members: \$ 28

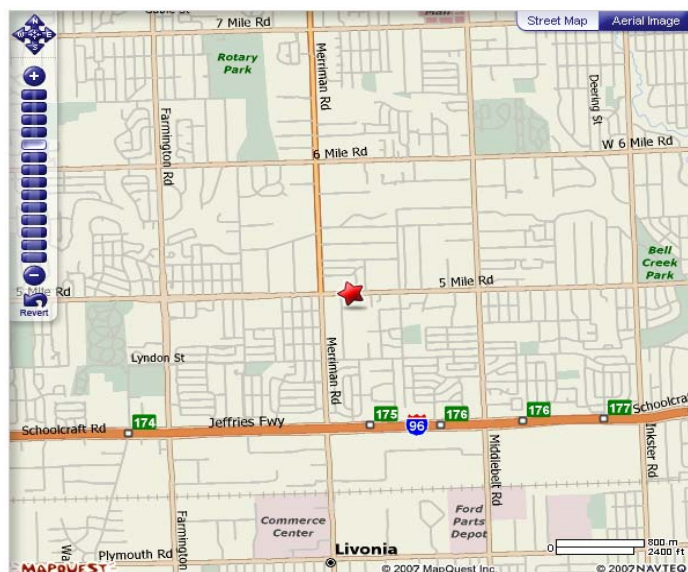
Registration Ends: June 1, 2007.

Sign Up: At the General Meeting or in Yahoo Site Files Section

Make Checks Payable: to FAAC. Send payment to **Ford Amateur Astronomy Club, P.O. Box 7527, Dearborn, MI 48121-7527**

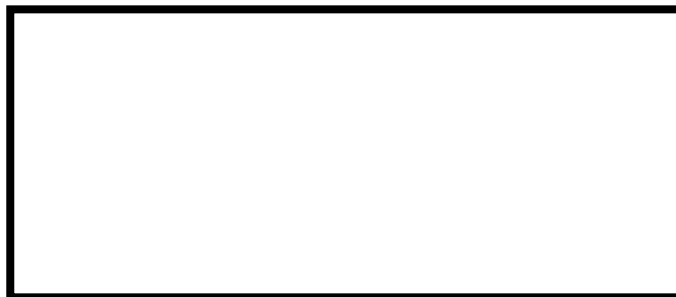
Bus pick up location: Riders Hobby Shop, 30991 Five Mile Rd, Livonia, MI 48154. See **STAR** on Map.

NOTE: Bus will leave at **6 pm SHARP!** (Don't be late!) and return by approx. 1:00am



For More Information: Contact Jim Frisbie via email: w8tu@comcast.net or call (734) 453-1422

Ford Amateur Astronomy Club
Star Stuff Newsletter
P.O. Box 7527
Dearborn MI 48121-7527



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