



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 17, Number 1

January 2008

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No Mars Rock Returned

Patrick L. Barry

Imagine someday taking a driving tour of the surface of Mars. You trail-blaze across a dusty valley floor, looking in amazement at the rocky, orange-brown hillsides and mountains all around. With each passing meter, you spy bizarre-looking rocks that no human has ever seen, and may never see again. Are they meteorites or bits of Martian crust? They beg to be photographed.

But on this tour, you can't whip out your camera and take on-the-spot close-ups of an especially interesting-looking rock. You have to wait for orders from headquarters back on Earth, and those orders won't arrive until tomorrow. By then, you probably will have passed the rock by. How frustrating!

That's essentially the predicament of the Spirit and Opportunity rovers, which are currently in their fourth year of exploring Mars. Mission scientists must wait overnight for the day's data to download from the rovers, and the rovers can't take high-res pictures of interesting rocks without explicit instructions to do so.

However, artificial intelligence software developed at JPL could soon turn the rovers into more-autonomous shutterbugs.

This software, called Autonomous Exploration for Gathering Increased Science (AEGIS), would search for interesting or unusual rocks using the

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You've Come a Long Way, Baby!

President's Corner

Don Klaser, FAAC President

That catch-phrase from the 60's takes on new life when applied to our club. In looking back not only over the past 3 years that I've been President, but back to when I joined the club, the growth in our capabilities is truly amazing.

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STAR STUFF

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FORD AMATEUR ASTRONOMY CLUB
P.O. Box 7527
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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.

President's Corner... (continued from page 1)

While the equipment we use today is more technically advanced than the professional gear of 30 years ago, I'm most impressed with the personal development I've been privileged to witness.

The first instance that comes to mind is the area of astro-imaging. While the new tools in the field certainly help, they're only as good as the hands that hold them; I have been literally blown away by the results our club members have produced.

Another instance has been the growth of our club's leadership role in the amateur astronomy community in Southeastern Michigan. Our influence in public outreach events has increased with each passing year, and I have no doubt that role will continue to grow. It is also noteworthy that a number of club members contribute and work in planetariums around Metro-Detroit; being able to reach audiences in this field is very rewarding indeed. And the number of observatories built and operated by FAAC members is truly amazing - I wonder if any other club in this area has as many?

Then, there's the willingness of members to go above and beyond to move the club forward, from finding new meeting and viewing sites, scholarship and apparel programs, a library, social events, light pollution education and more, the individuals that make up this club are among the finest people that I've ever been associated with. It has been a pleasure to have served all of you as President these past 3 years.

Don

No Rocks ... (from page 1)

"Using AEGIS, the rovers could get science data that they would otherwise miss," says Rebecca Castaño, leader of the AEGIS project at JPL. The software builds on artificial intelligence technologies pioneered by NASA's Earth Observing-1 satellite (EO-1), one of a series of technology-testbed satellites developed by NASA's New Millennium Program.

AEGIS identifies a rock as being interesting in one of two ways. Mission scientists can program

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No Rocks ... (from page 2)

AEGIS to look for rocks with certain traits, such as smoothness or roughness, bright or dark surfaces, or shapes that are rounded or flat.

In addition, AEGIS can single out rocks simply because they look unusual, which often means the rocks could tell scientists something new about Mars's present and past.

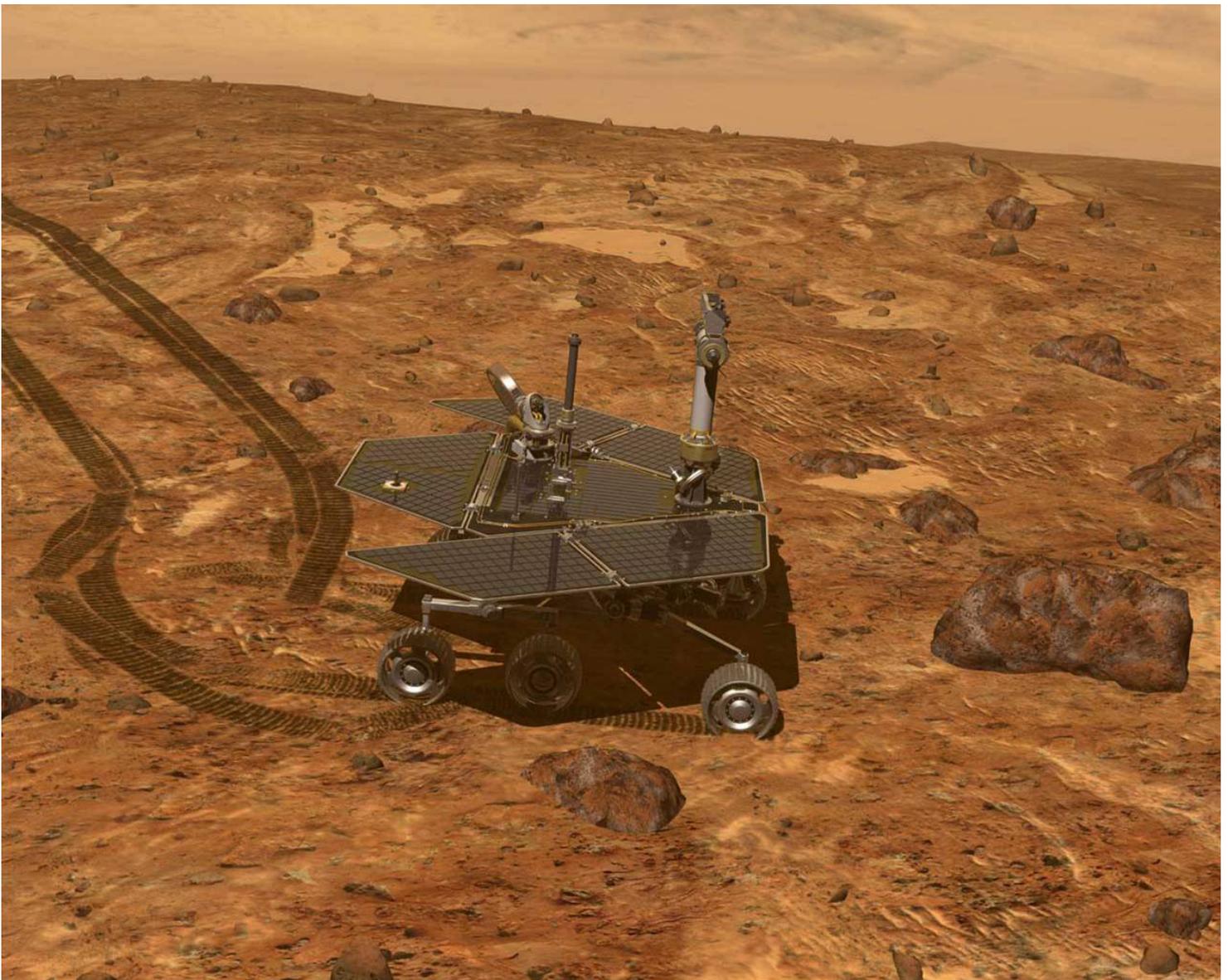
The software has been thoroughly tested, Castaño says, and now it must be integrated and tested

with other flight software, then uploaded to the rovers on Mars.

Once installed, she hopes, Spirit and Opportunity will leave no good Mars rock unturned.

Check out other ways that the Mars Rovers have been upgraded with artificial intelligence software at nmp/TECHNOLOGY/infusion.html#sciencecraft.

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



Are these rocks of any scientific interest? With the new AEGIS software, the Mars Rovers, Spirit and Opportunity, will be able to judge for themselves whether a scene is worth a high-resolution image. (Artist's rendering.)

Laser Pointers - Amendment

Don Klaser, FAAC President

Due to observed or reported behavior involving the possible misuse of laser pointers at FAAC events/sites, the FAAC will consider adding an amendment to the club by-laws, subject to membership approval at the next meeting.

Herewith is the proposed amendment:

"Section 3.5 - Misuse of a Laser Pointer

"The Astronomy Club recognizes as proper laser pointer usage the highlighting of on-screen content during lectures, and the pointing out of astronomical (night-sky) objects solely for demonstration and educational purposes. Any member who misuses a laser pointer, or willfully permits one to be misused, is committing an action that is both dangerous to persons and property and in violation of the stated objectives of the Astronomy Club. Misuse of a laser pointer may include, but is not limited to: aiming at an individual or group of individuals, or at operating land-based motor vehicles, aircraft, watercraft, etc.

"Such action shall be subject to this amendment if said action occurs at a recognized observing site, or official function, of the Astronomy Club. Such action therein is subject to consequences that may include a period of suspension of membership with exclusion from club activities and privileges, or permanent expulsion and like exclusion, at the discretion of the Astronomy Club's Executive Board. The concurring statements of two witnesses reporting such action shall be required to bring such behavior to the attention of the Executive Board for subsequent review and disposition."

December 6 Meeting Minutes

Ken Anderson

Attendance: 34+

Don Klaser started the joint FAAC/SIG meeting at 5:30 in the HFCC Health Building Hackett conference room with introductions, and pizza and pop. We welcomed Eric Veggian and Tim as our newest members; plus also had the pleasure of having 6 guests (Ben Cline, Art Parent, Mike Olson, etc.). John Schroer was being treated at Huron Valley Sinai Hospital, but still observed Saturn and Venus through his East facing window on clear mornings. He thanked all who send cards or visited him while he was ill. Milton

French evaluated the skies of Dearborn Heights, and said he could see down to magnitude 4.3 naked eye, 7.3 with binocular, plus also observed with his 13" dobsonian. Tony Licata is interested in sending sky brightness letters to businesses; and mentioned West Virginia received responses to almost all letters. The International Dark Sky Association (IDA) committee consists of Frank Ancona, John Schroer, and Greg Ozimek. Jim Frisbie, Gordon Hansen, and Tony Licata have a new F10 prime focus 2.5x power mate webcam image processing SIG in January. John Kirchhoff observed comet 17P Holmes larger than the moon in 7x50 and 10x50 binoculars, and noted a small tail. The comet was visible in Perseus all night long. The last time this comet out gassed was in 1880, and it may do it again. Ken Anderson also has been observing comet 17P Holmes and Mars.

Jim Frisbie gave the "Sky Quality Meter" tech talk. It is a sensitive light meter that measures how dark the sky is. It displays both magnitude and temp. Inside it measured 9.97 and 20 deg C, and 6.84 under the bright light. It is a 0.1 magnitude/arc sec² accurate quality meter with a 40 deg cone sky sensor that measures only visible light. One can use it to compare sites, compare with and without lighting, track year to year improvements or deterioration. The decal on the side list a maximum of 23 for dark, 22-23 for dark sky sites, and 17-19 for full moon or city. Club members John, Jim, Gordon, Clay, Jeff, and Ken evaluated some of their homes and observing areas, as follows:

Downtown Hudson (outside dark sky preserve) 15.4, Plymouth 18.2, Woodhaven 18.7, Island Lake, December 16, with clouds/overcast 13-15, Island Lake December 16, crescent moon, no clouds 18.33-18.45, 0 to 1 degree C, Island Lake January 2, 2008, no moon 18.73-18.81, -6 to -8 degree F, Hudson (with clouds) 20.3, Manchester 20.7, Richmond Airfield 20.7, Lake Hudson at Beach (with clouds) 21.0.

The beach may have shrouded some surrounding lights. Astronomy magnitudes are about 2.5x different for each visual magnitudes (what our eyes can differentiate). \$119 Sky Quality Meters can be purchased at Riders Livonia, Unihedron, and Oceanside Photo and telescopes.

Jim's personal opinion is this exceeded his expectations and may be used to quantitatively fight light pollution. It was very easy to use. He recommended the club purchase, and the club voted approval to purchase.

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Minutes ... (from page 4)

Future studies could include correlation/transfer function to convert to standard astronomy magnitudes, and correlation between multiple sky quality meters.

The public has become interested in sky darkness with newspaper challenges to count the major stars visible in the constellations Cygnus and Orion as shown in the picture.

John Kirchhoff gave the main presentation, "Holiday Astro Gear," a show and tell of what's new giving ideas for potential gifts. John shared his personal lunar photos made via webcam.

All prices are what the secretary heard during the presentation, and prices may be subject to change, or vary from store to store.

Don Klaser led the business portion. Ken Anderson gave the Secretary's Report, and both September and October minutes were accepted and approved. John Blum and Milton French had some minor corrections to the October minutes which have been posted to the club website. Gordon Hansen gave the Treasurer's Report. 2008 FAAC dues reminders have been sent out for all non-life members. Pay by end of January to avoid a \$5 late fee.

Harold Thomason gave the Equipment Manager's Report. Per Frank Ancona, we may now have an 8" Blue SCT (Diva Mac) and eyepiece. Our club also owns a 4.5" dobsonian, 10x10 ft. canopy, laptop, projector, screen, sound system, and bullhorn. Club members are reminded to read the new Process and Rules, found in the July 2007 Star Stuff and on our Yahoo website, if they want to sign out equipment.

Jim Frisbie, Bob FitzGerald, and John Schroer of the FAAC Election Committee announced nominees for election at the January meeting:

President – Doug Bauer, V.P. - Gordon Hansen,
Secretary – Ken Anderson, Treasurer – Steve Flessa.

Other nominations are welcome at the January 2008 meeting, before the actual election.

The FAAC Scholarship Committee consists of Ed Halash, Gordon Hansen, John Schroer, and Bob FitzGerald. We currently have about \$400 in the FAAC Scholarship fund. Please see October minutes for draft of FAAC HFCC Scholarship procedures.

Ken Anderson is seeking volunteers to help with the FAAC club telescope committee. We are

potentially seeking a large semi permanent but transportable dobsonian, which could be relocated for star parties. This is in response to club interest when a posting that a 36" Obsession was available for \$20,000 and sold the same day. John Schroer suggested me may be able to get one donated to us. This committee would also seek land to house/store the telescope and the primary observing site. The goal would be club members would only need to bring eyepieces and key, to open up, and start observing. Gordon Hansen advised us our club only has \$5000, some of which is allocated to GLAAC, etc. Our Richmond fee is only \$300 to their club picnic, since we do not have anything permanent at their airfield.

In club events:

"Moon Occultation of M45 Pleiades" October 27 8-9:30 pm Lake Erie Metropark was cancelled due to bad weather. Ken Anderson observed this and Mars from Island Lake.

Eric Rasmussen hosted comet 17P Holmes at the U-M Dearborn Observatory 16" telescope in the evening, every Tuesday evening after the HFCC planetarium "Fall Sky" shows give by FAAC's Dennis Salliotte, Bob Clubb, and Ken Anderson. Harold Thomason and Greg Ozimek volunteered to help out Eric. The planetariums were near full, and Ken also brought his binoculars for post shows.

Bob Clubb has created a FAAC/HFCC Planetarium webpage. Dr. Jacobs and Mike Lapresto have created a "Tour of the Solar System" presented on the campus of HFCC.

Catholic Wyandotte School November 14-15, in vicinity of Eureka and Ford or Fourth. Attended by Dennis Salliotte, Bob FitzGerald, Doug Bauer and Bob MacFarland. Bob MacFarland presented Astronomy 101 to 50-60 youngsters, since it was too cloudy to observe the comet.

John Schroer has set up a Detroit Science Center "Behind the Scenes" FAAC Family event Saturday December 8 starting at 9 am, as a way to show thanks for FAAC support. The IMAX projector and movie reels will be shown, along with a free 9:15 am planetarium show, "Seven Wonders of the Universe." Guests may stay afterward for normal DSC exhibits, including "Grossology" and "Electricity." Body/Sea Monsters IMAX and Human Body exhibit are not free. DSC parking lot is not free, but John advises one may find free parking on Brush, near the DSC.

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Minutes ... (from page 5)

The Geminid Meteor Showers occurred Thursday December 13 – Jon Blum was able to observe them from Hawaii, but we were clouded out in at Michigan.

The SIG meetings are the second Thursday of each month (next, December 13) at 5:30 pm at HFCC Rosenau conference room. This meeting will be a SIG Photoshop Workshop class taught by Tony Licata. This is a laptop Photoshop tutorial. Step by step handouts will be provided. Tony informed us the next Dark Sky workshop will be September 29-October 5, 2008 at River Valley in Gladwin, Michigan (immediately following the star gaze September 25-28, so we can keep equipment set up!). This site has restrooms and a shower.

FAAC meetings are every fourth Thursday of each month (next is January 24) at HFCC Rossenau conference room. The most important event is club elections. Main presentation and tech talk are TBD; but most likely it will be Ask the Astronomer. The FAAC Board meeting is the first Thursday of each month (January 3, 5 pm) at Dimitri's Restaurant in Dearborn, MI. We discussed member badges/ID cards. We will read proposed amendment for "deliberate misuse of hand-held laser pointer" at both January and February meetings; with a vote in February. We are requesting help from Doug Bock or someone familiar with Myspace website, to link an astronomy Myspace account with our FAAC website, with the intent to attract younger members.

The FAAC Library in HFCC Science Center, conference room 109 may be open one hour before monthly FAAC meeting. Gary Stahl recommends a courtesy e-mail a day before the meeting. The list of 100+ books and brief descriptions is available at the FAAC Yahoo site; books can be signed out for one month, with extensions allowable. There are still 20 or more books to be cataloged. FAAC President and V.P. are backup key holders for returning books.

Ice Daze January 19 at Marshlands Museum in Lake Erie MetroPark – Bob MacFarland and Bob FitzGerald. This fun family event features winter and nature activities, plus solar and night observing noon-11 pm. Solar and static equipment displays until 4 pm. Enjoy dinner at Three Hermanos Restaurant prior to night time observing. Parking lot lights will be turned off. Enjoy hot cocoa, barn fire, heated indoor

restrooms. Free public event, but MetroPark vehicle permit required.

George and Pat Korody plan to attend Winter Star Party (February 2008). Register or find out more details on the Winter Star Party web site. Cost is about \$75 per person, plus \$48 to camp.

The 5th Astronomy Expo and Swap meet will be February 16, 9am-3 pm at Holy Cross Lutheran Church on 6 Mile and Merriman, Livonia, is being coordinated by Tom Blaszak. They will have an indoor planetarium in the gymnasium, plus door prizes/raffle. Six presentations are planned, including Fred Adams of University of Michigan. This year we will be expanding to use the chapel.

"Total Eclipse of the Moon" (February 20, 8:43 pm -12:09 am, mid-eclipse 10:26 pm) event is planned at Marshlands Museum, Lake Erie MetroPark 7:30-11 pm. Heated indoor restrooms are available. Free event, but MetroPark vehicle permit required. The Detroit Science Center will also be observing.

Forest Elementary has advised us they will be holding their Astronomy event every other year, next one to be 2009 (2008 is an off year).

FAAC Club Banquet at Station 885, Plymouth, MI March 9 (after Easter) – contact Doug Bauer. Price is \$30 per person (limited seating). Please pay Treasurer Gordon Hansen in advance.

Lights Out America is March 29, 8-9 pm, demonstrating the effect of light pollution (like enjoying the Milkyway), also energy wasted with current lighting, and potential energy savings. This will be similar to San Francisco where they saved millions of dollars. Last month Paris turned off their lights for global warming, and observed the benefit of the night sky. Frank Ancona, representing the International Dark Sky Association (IDA) Committee, met with both Livonia and Westland City Councils to discuss potential savings. Ann Arbor switched to LED lights on two streets with full LED before 1 am, and half LED after 1 am; this is a step in the right direction for reducing energy consumption (100% savings) and improving naked eye visibility of the night sky, but current light pollution filters may not work with LED. He previously met with Michigan's Governor Jennifer Granholm and State Congressmen Lavanche and Kotter and informed them of about \$10 million potential cost savings for new rheostat dimming lights, and downward light fixtures. One reference stated Sacramento, California wasted \$150 million in lighting. He

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Minutes ... (from page 6)

convinced Lansing to turn off lights on the capital in the late evening. We wish him the best luck in encouraging our legislature to purchase efficient lighting, saving taxpayers money, and preserving our night sky.

Astronomy Day is April 10, with events at New Detroit Science Center (DSC), including solar observing. A photo contest will award prizes in deep sky, and lunar/planetary categories.

Kensington MetroPark is seeking recommendations for a new pavilion (next year), acknowledging that the GLAAC AATB brings in more people than any other single event at the park. Next GLAAC planning meeting is Sunday TBD at 1 pm at the Nature Center. Contact Bob MacFarland or Bob FitzGerald for details or future meetings.

2009 is the International Year of Astronomy (IYA 2009) celebrating the 400th year of the telescope (since Galileo's). American Astronomy Society and Astronomical League are celebrating "International Year of the Telescope." All year long, expect speakers. Astronomy Day will be advertised more, and we may get additional support for our Astronomy at the Beach event. The DSC, Cranbrook Institute, FAAC, and GLAAC plan to bring more attention on astronomy to the general public. Eric Rasmussen will be planning events at University of Michigan (Dearborn and Ann Arbor) and HFCC. U of M will have Saturday Morning Talks. John Schroer passed out several handouts at the board meeting to show national intentions.

Gordon Hansen has sweatshirts, shirts, hats, and patches available for purchase from Diane Worth's last order. We are considering a new order from Saginaw for sweatshirts, jackets, shirts, hats, and patches and a possible expansion of items from a new catalog. Gordon has new small logo on chest of stenciled \$10 t-shirts and \$20 sweatshirts, which were available for the SESMA/FAAC picnic. One club member asked if we could also have the large logo stenciled on the back for additional cost in future orders.

The 2008 Astronomy calendars are available for \$7. Royal Canadian Handbooks are in, price has yet to be announce. Please contact Gordon Hansen if interested.

The FAAC seeks 2007 speakers for both FAAC 30-60 minute main presentations, and 15-20 minute tech talks. Contact Don Klaser at dklaser4750@wowway.com or call 586-596-9510.

Meeting Agenda - January 24

5:30 pm

Opening/Introduction/Member Observing

Tech Talk: SQM Update - Jim Frisbie

Presentation: Ask the Astronomer

Club Business/Secretary/Treasurer reports

Club Projects/Committees/Member support

- Election of Officers - Doug Bock
- Astro-Imaging SIG - Tony Licata
- 5th Annual Astronomy Expo & Swap - Saturday February 16 - Tom Blaszak
- DSC Tour - Recap - John Schroer/All
- Club Banquet - Saturday, March 29, 2008 - Doug Bauer
- Ice Daze@ Lake Erie MetroPark - Recap - Bob MacFarland/All
- Lunar Eclipse Event - Wed., Feb. 20, 2008 - Don Klaser
- Open - All

Time to RENEW!!!!

Gordon Hansen

It's time to renew your membership in FAAC, if you haven't yet! Send your check in today to FAAC, P.O. Box 7527, Dearborn, Michigan 48121-7527. Please include any updates to your contact information. Or submit at the January meeting.

Membership includes access to the observing sites at Island Lake Recreation Area, Lake Erie MetroPark, and Richmond Airport. Discounted subscriptions to Sky & Telescope and Astronomy magazines. AND most importantly, the interaction with people who share your love for astronomy.

Renewal fees for 2008 are only \$25, but **after January 31, \$30!**

SIG - Astro Imaging

The next meeting of the Astro Imaging SIG is Thursday, February 14, 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. Topic is TBD.

Treasurer's Report

Gordon Hansen

Account	12/31/2007 Balance
Bank Accounts	
Checking	\$422.54
Savings	\$2,229.82
TOTAL Bank Accounts	\$2,652.36
Cash Accounts	
Cash Account	\$89.94
TOTAL Cash Accounts	\$89.94
Investment Accounts	
Certificate of Deposit	\$2,026.63
Asset Accounts	
Equipment	\$479.95
Scholarship	\$463.05
TOTAL Asset Accounts	\$943.00
OVERALL TOTAL	\$5,711.93
Memo:	
GLAAC	\$2,015.62

Items for Sale

Photon 127 5" f9 achromatic refractor for sale.
\$300 OBO. Contact Clay Kessler,
ckessler@gatecom.com.

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 California). 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

Coulter 10" Dobsonian telescope. \$400.

Contact Bob Stonik, 313-361-4954.

Orion XT10 Intelliscope for sale/trade. With computerized object locator, Orion soft OTA duffel bag, new 2" crayford focuser and 1.25" adapter, Bob's collimation knobs on secondary, custom baffle/cooling fan for primary, 8X50 RACI finder, telrad base, custom stalk for COL. Two years old, excellent condition, and nice star test. New focuser just installed and hasn't been collimated yet, but it looks real close. \$650/neg. Or if you prefer I can swap the focuser with a mint red Moonlite CR2 for additional \$200.00.

Willing to trade plus additional funds for nice APO refractor. See it at the swap meet or call Jim Moscheck 313-386-6944 days, 313-320-9260 cell

Ultraviolet Surprise

Patrick L. Barry and Tony Phillips

How would you like to visit a universe full of exotic stars and weird galaxies the likes of which astronomers on Earth have never seen before?

Now you can. Just point your web browser to galex.stsci.edu and start exploring.

That's the address of the Galaxy Evolution Explorer image archive, a survey of the whole sky program at ultraviolet wavelengths that can't be seen from the ground. Earth's atmosphere blocks far-ultraviolet light, so the only way to see the ultraviolet sky is by using a space telescope such as NASA's Galaxy Evolution Explorer.

About 65% of the images from the all-sky survey haven't been closely examined by astronomers yet, so there are plenty of surprises waiting to be uncovered.

"The Galaxy Evolution Explorer produces so much data that, beyond basic quality control, we just don't have time to look at it all," says Mark Seibert, an astronomy post-doc at the Observatories of the Carnegie Institution of Washington in Pasadena, California.

This fresh view of the sky has already revealed striking and unexpected features of familiar celestial objects. Mira is a good example. Occasionally visible to the naked eye, Mira is a pulsating star monitored carefully by astronomers

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Surprise ... (from page 8)

for more than 400 years. Yet until Galaxy Evolution Explorer recently examined Mira, no one would have guessed its secret: Mira possesses a comet-like tail 13 light-years long.

"Mira shows us that even well-observed stars can surprise us if we look at them in a different way and at different frequencies," Seibert says.

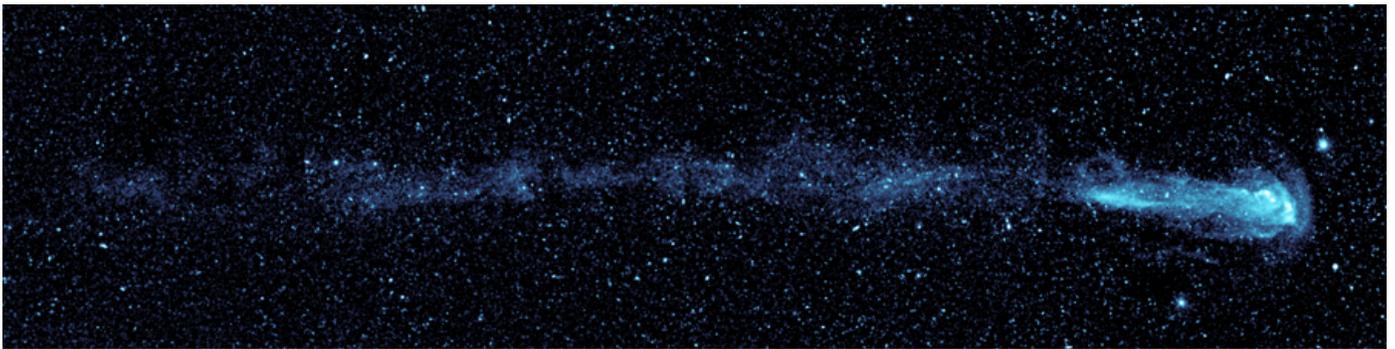
Another example: In April, scientists announced that galaxies such as NGC 1512 have giant ultraviolet spiral arms extending three times farther out into space than the arms that can be seen by visible-light telescopes. It would be like looking at your pet dog through an ultraviolet telescope and discovering his ears are really three times longer than you thought! The images from the ultraviolet space telescope are ideal for

view. Each image covers 1.2 degrees of sky—lots of territory for the unexpected.

If someone combing the archives does find something of interest, Seibert advises that she or he should first search astronomy journals to see whether the phenomenon has been observed before. If it hasn't, email a member of the Galaxy Evolution Explorer science team and let them know, Seibert says.

So what are you waiting for? Fire up your web browser and let the discoveries begin!

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



Astronomers looking at new ultraviolet images from the Galaxy Evolution Explorer spacecraft were surprised to discover a 13-light-year long tail on Mira, a star extensively studied for 400 years.



FAAC Dinner Banquet 2008

Saturday, March 29, 2008
6:00 pm until ?

Astro Slide Show – Prizes – Astro-Jeopardy

LOCATION: Station 885, located at 885 Starkweather, Plymouth, Michigan 48170, 734-459-0885.

Dinner Selections:



10oz. Prime Rib of Beef au Jus with Roasted Potatoes

or

Salmon with Rice Pilaf

or

Chicken Piccata with Linguini



Dinner includes bread, fresh mixed vegetable medley, and a mixed green salad

Dessert: Peach Cobbler



Coffee, tea, iced tea, and soft drinks will be available throughout the evening.
A Cash Bar is available. Ask your server for beer, wine, and mixed drinks.

ADMISSION: \$30 per person.

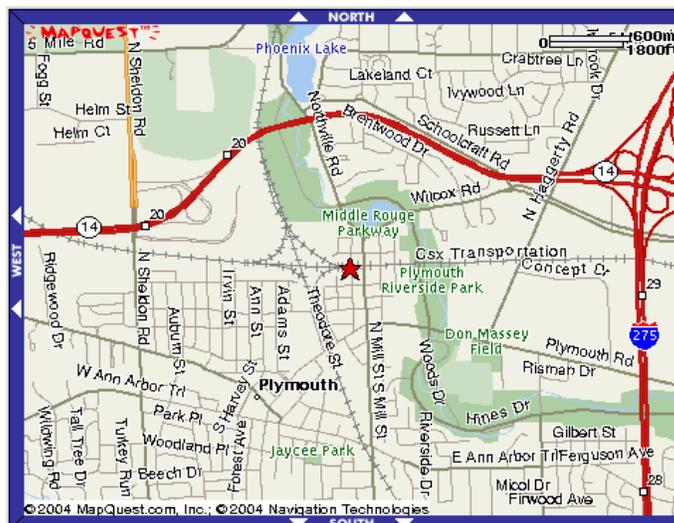
Cocktails 6:00 pm (cash bar), Dinner 7 pm.

Make Checks Payable: Please pay Gordon Hansen at the General Meeting, or send payment to Ford Amateur Astronomy Club, P.O. Box 7527, Dearborn, MI 48121-7527.

"Thank you for another great year. We hope to see you there. Please let us know if you are coming!"

- - **FAAC Board.**

Location: The restaurant, **Station 885** is located 3 blocks north of Plymouth Road, just east of downtown Plymouth. * See STAR on map*



For More Information: Contact Doug Bauer via email: DougBauer@comcast.net or call (248) 828-7385



RIDER'S
HOBBY SHOPS

Great Red Spot
Astronomy Products
WWW.GreatRedSpot.Com
Telescopes • Lasers
Accessories

The 5th Annual

Astronomy Show & Swap Meet

Hosted by
Ford Amateur Astronomy Club (FAAC)
& **Rider's Hobby – Livonia**

Saturday, Feb 16, 2008 9:00 am - 3:00 pm

Holy Cross Church Gymnasium, 30650 Six Mile, Livonia, 48152

Included: FAAC Speakers

- 10:00 am: Astronomy 101 – G. Hansen
- 11:00 am: The Leap from Film to Digital Image – C. Kessler
- 12:00 pm: How to Succeed in Astronomy without Going Broke – J. Schroer
- 1:00 pm: How to Safely Maintain Telescope/binocular/eyepiece Optics – J. Kirchhoff
- 2:00 pm: Binocular Observing – J. Frisbie

Broader Astronomy Subjects

- 10:30 am: Preserving the Night Sky in Our Neighborhoods – F. Ancona
- 11:30 am: How to Make a Star – Dr. K. Bjorkman, U of Toledo
- 1:00 pm: The Future of the Universe – Dr. F. Adams, U of M

Planetarium Lectures @ 10am, 11am, 1pm, 2pm – T. Cervenak

Earn Cash By Selling Your Extra:

Telescopes - Eyepieces - Cameras - Binoculars - Mounts
Tripods - Software - Publications - Accessories, etc.

Admission: \$5.00 at the door or presale
(children 15 and younger – Free)

Table Fee: Individuals \$15 in advance, or as
available at Door, \$20 (one person).

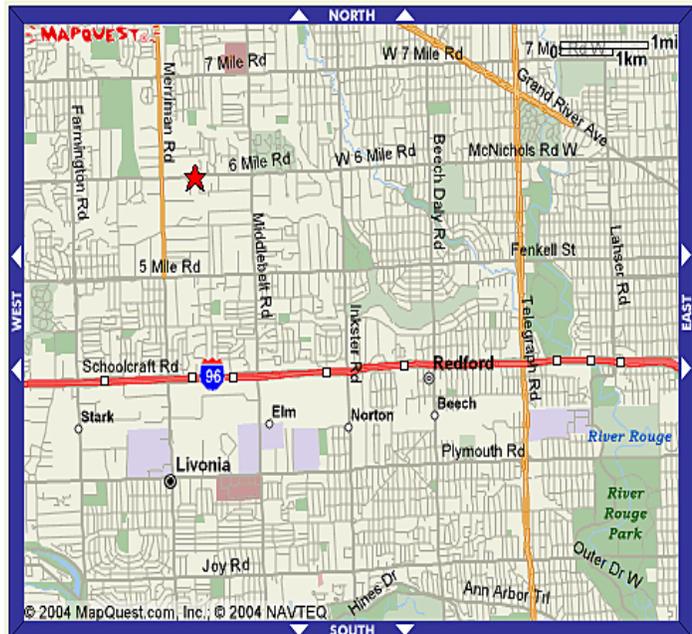
Advanced Registration ends January 21, 2008.

**Vendors, Manufacturers, Commercial, contact
below for table, exhibit space and fees.**

Doors Open: 8:00am for setup. **Complimentary
Coffee & Donuts provided by Rider's Hobby.**

Make Checks Payable: to **FAAC** for advance
admission or table registrations. Send payment to
**Ford Amateur Astronomy Club, P.O. Box 7527,
Dearborn, MI 48121-7527 - by Jan. 21, 2008.**

Location: Holy Cross Lutheran Church Gymnasium
30650 Six Mile, Livonia, 48152, north side of Six Mile,
½ mile east of Merriman. See STAR on map.



For More Information: Contact Tom Blaszak via email: key_string_guy@yahoo.com or call (734) 425-9720, or
John Kirchhoff via email: riderslivonia@aol.com or call (734) 425-9720

Ford Amateur Astronomy Club
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See you at the
**5th Annual FAAC/Rider's
Astronomy Expo and Swap Meet!**
Save BIG \$\$ all day! February 16th, 9-3, at
Holy Cross Church Gymnasium,
30650 Six Mile, Livonia. See inside for details!