



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 15, Number 10

October 2006

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Planet in the Machine

Diane K. Fisher and Dr. Tony Phillips

The story goes that a butterfly flapping its wings in Brazil can, over time, cause a tornado in Kansas. The "butterfly effect" is a common term to evoke the complexity of interdependent variables affecting weather around the globe. It alludes to the notion that small changes in initial conditions can cause wildly varying outcomes.

Now imagine millions of butterflies flapping their wings. And flies and crickets and birds. Now you understand why weather is so complex.

All kidding aside, insects are not in control. The real "butterfly effect" is driven by, for example, global winds and ocean currents, polar ice (melting and freezing), clouds and rain, and blowing desert dust. All these things interact with one another in bewilderingly complicated ways.

And then there's the human race. If a butterfly can cause a tornado, what can humans cause with their boundlessly reckless disturbances of initial conditions?

...continued on page 3

Eager Minds Are Waiting!

President's Corner

Don Klaser, President, FAAC

Several weeks ago, I, along with some other club members, had the opportunity to participate in the Sally Ride Science Festival held at Macomb Community College. Founded by NASA Astronaut Sally Ride, the Festival is dedicated to supporting girls in grades five through eight who are (or might become) interested in science, math and engineering. And with an anticipated shortage of scientists and engineers at hand, it is critical that these girls are kept in the technical pipeline!

The sky was crystal clear that morning, and while Jan prepared our table inside the auditorium for the walk-around fair, Gordon, Ken and I set up our scopes for some solar observing.

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STAR STUFF

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FORD AMATEUR ASTRONOMY CLUB
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VICE PRESIDENT:	Ed Halash
SECRETARY:	Ken Anderson
TREASURER:	Gordon Hansen
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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**.

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)
Life Membership:	\$150	

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)*

This two-hour segment would give us an opportunity to stimulate the interest and curiosity of the young eager minds of the Festival's attendees and their parents, as well as the teachers who were there.

As they stopped by our table inside, Jan directed them outside to our waiting scopes. Soon lines were forming to get a look at white light and hydrogen-alpha views of the sun. Questions followed from both the girls and their parents.

Teachers were amazed that we offered our time and talents to this endeavor - they wondered how much we charged to bring a program like this to their school. Free you say! Wow! All this excitement over a program presented by amateurs! Yeah, amateurs - people with day jobs (unless you're retired).

People who do it for the love (joy) of it. Amateur - from the Latin verb "amare" - to love. Even though we're not trained educators, because of our enthusiasm for the subject, we're able to communicate the knowledge we have to others, who then become interested as well.

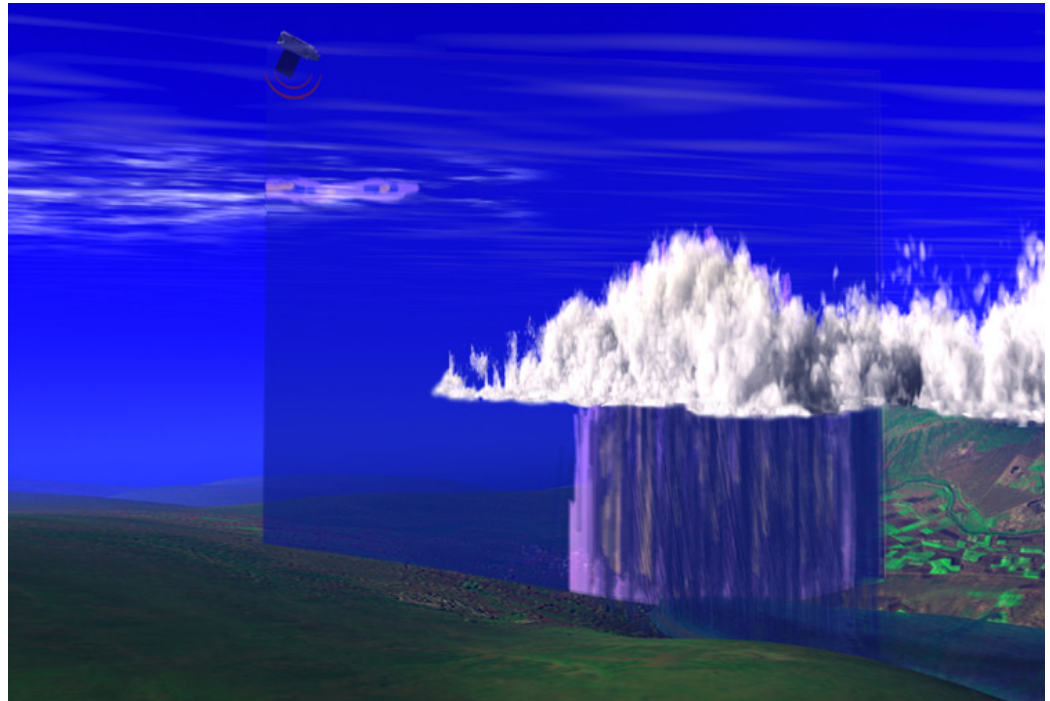
This one-day festival was great - our children, our future - need more. We must bring our knowledge and enthusiasm for the science and hobby of astronomy to as many receptive young minds as we can. One of the best ways to accomplish this is to work closely with our local schools.

Contact the principle of, or science department head at your neighborhood school, whether or not you have children there. The outreach can be as a school science fair, or as basic as a classroom setting using equipment and star chart.

Most teachers would be thrilled to have the assistance of a dedicated 'amateur' to heighten the interest and involvement of their students. Don't down play your ability to contribute - let your star light shine!

All it takes is a phone call and a desire to help. A line in a song by "Earth, Wind and Fire" says it all when it comes to preparing our children for the future: "Shining star for you to see, what your life can truly be."

Don Klaser

Planet in the Machine *(continued from page 1)*

CloudSat is one of the Earth observing satellites collecting data that will help develop and refine atmospheric circulation models and other types of weather and climate models. CloudSat's unique radar system reads the vertical structure of clouds, including liquid water and ice content, and how clouds affect the distribution of the Sun's energy in the atmosphere. See animation of this data simulation at www.nasa.gov/mission_pages/calipso/multimedia/cloud_calip_mm.html

Understanding how it all fits together is a relatively new field called Earth system science. Earth system scientists work on building and fine-tuning mathematical models (computer programs) that describe the complex inter-relationships of Earth's carbon, water, energy, and trace gases as they are exchanged between the terrestrial biosphere and the atmosphere. Ultimately, they hope to understand Earth as an integrated system, and model changes in climate over the next 50-100 years. The better the models, the more accurate and detailed will be the image in the crystal ball.

NASA's Earth System Science program provides real-world data for these models via a swarm of Earth-observing satellites. The satellites, which go by names like Terra and Aqua, keep an eye on Earth's land, biosphere, atmosphere, clouds, ice, and oceans. The data they collect are crucial to the modeling efforts. Some models aim to predict short-term effects—in other words, weather. They may become part of severe weather warning systems and actually save lives. Other models aim

to predict long-term effects—or climate. But, long-term predictions are much more difficult and much less likely to be believed by the general population, since only time can actually prove or disprove their validity. After all, small errors become large errors as the model is left to run into the future. However, as the models are further validated with near- and longer-term data, and as different models converge on a common scenario, they become more and more trustworthy to show us the future while we can still do something about it—we hope.

For a listing and more information on each of NASA's (and their partners') Earth data-gathering missions, visit science.hq.nasa.gov/missions/earth.html. Kids can get an easy introduction to Earth system science and play Earthy word games at spaceplace.nasa.gov/en/kids/earth/wordfind.

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

September Meeting Minutes

Ken Anderson

Meeting officially started at 5:30 pm with pizza and pop available 15 minutes earlier, 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.

There were a couple of guests including Dave Baily. Many club members went to the Great Lake Star Gaze. One member and his wife went to Lake Hudson Fri (looking west) and Sat (looking East) and viewed M33, Trifid Neb, Omega Neb with his 10" Dob unfiltered. Ken and Jim Frisbie viewed and photographed the Full Moon at perigee. Ed Halash hiked to Buena Vista (8500-ft.) below the 14,000-ft. peak and observed a bright blue Milky Way from horizon to horizon on a clear night. The mountain/valley weather created unstable air and stars twinkled on and off. He brought his 22" Dob to Colorado and used it three nights. He also linked up with the Arkansas River Amateur Astronomy Society.

Several people evaluated the Sky Scout loaned by John Kirchoff's Ryder's Hobby Shop in Livonia (Thanks John!). Jon Blum said it gives too many options, making him unsure, and did not find it useful. Audio could only be heard through headphones. Don Klaser said gave good information on objects. He mounted it to a camera tripod, and though it was off in azimuth. Jim Frisbie said you could plug a speaker in the headphone jack for groups. "Sky & Telescope" stated the ID FOV is larger than the search and find FOV, for multiple stars in the same constellation. Closeness to the eyes makes a big difference: 3.5 deg at 13" vs. too large if held too close. It ranks from brightest to dimmest in FOV.

The presentation was deferred to later since Tony had to get the club projector (meeting room not set up properly). Ken did not compete the August minutes due to a 150-ft. oak tree falling down in his back yard and having to chainsaw wood (they are available online at our Yahoo group site, and summarized in this newsletter). Gordon Hansen said we have \$6857 total in the bank of which \$1642 is committed to GLAAC.

The Astronomy Magazine \$2500 prize winner went to Celestial North Inc in Freeland, Washington. The host a bi-weekly radio show. Some 32 clubs entered, two from Michigan (one from Ann Arbor).

The two runners up were Scandia in Florida, and West Kentucky Amateur Astronomers. Jim Frisbie will create a condensed version for the public for our Boonhill FAAC web site, advertising the outreach programs FAAC has supported.

Diane Worth passed out handouts with the cost of club logo apparel to choose from for club members only such as: Sport Bag "for Astro Star Chart" \$15.11, Hateras Sport Bag Royal w/ Black \$38.43, Perimutter Lubin Cool and Dry Cap \$14.05, Bill Bass Premium Woven 60/40 dress shirt \$36.51, Basic Expandable Bag/Brief Case \$18.29, Sweat Shirt Port Authority Hooded Pullover \$35.66, Jacket Port Authority Legacy Black/Grey \$41.81, and Ottoman Knit Short Sleeve Shirt ("Our club black shirt", or white) for \$31.84. At meeting's end Diane and Gordon presented items previously ordered including extra club shirts and hats. Gordon took additional orders after the meeting, and items ordered may be available at our December 7th club meeting. Diane is also working on a similar club patch which could be sold to the general public.

Bob Fitzgerald informed us of the new FAAC Hotline number 248-207-2075. Don Klaser added it on the new order for 1000 color club brochures. Tony Licata is now chairing the SIG meetings, relieving Jim Frisbie (thanks to both of you!) on the second Thursday of every month at 5:30pm in HFCC Rosenau Conf Room, same room as our FAAC club meetings. On 10/12/06 presentation is "DSLR Software Program for Astrophotography."

Bob MacFarland gave a GLAAC Kensington update for Friday and Saturday, September 29-30. He still needs help at the FAAC table (only 50% of slots filled). There is a special club members only speaker presentation at Kensington Nature Center at 2 pm on Saturday.

Here are details of the main September 29-30, 2006 10th Annual Astronomy on the Beach event: NASA Astronaut guest Speaker – Dr Andrew "Drew" Fuestel, "How do you Learn to Live and Work in Space."

Other Presentations/Shows (Comet Making, How to Choose and Use Telescopes, Light Pollution, How Cold is Space, Astronomy 101, Tour the Constellations, etc.). Sky Tours and Public Invited Beginner Night and Sky Orientation (reservations recommended if you request one-on-one help) Concessions/Rest Rooms/Sales Tables open.

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

Don Klaser advised everyone that FAAC will be supporting the 11th Annual Sally Ride Science Festival for 5-8 grade girls on 10/1/06 at Macomb Community College. We will be bringing solar telescopes (Ken, Gordon, etc), white light filters (Don and Jan), a 10" Dob, and Gordon will be presenting 90 min Astronomy 101 to pre-registered adults. Astronaut Kathy Sullivan will give a presentation. Ken's daughter Yolanda is signed up for the event attending "making batteries out of lemons" and "plant/insect co-evolution" 45 min sessions. Note almost all sessions are led by leading women in their fields, setting good examples for future career women, and encouraging girls to continue their interest in the sciences.

Many FAAC members attended the Great Lake Star Gaze at River Valley RV Park Campground. Author and "Sky & Telescope" magazine binocular column-writer Phil Harrington gave a talk on building amateur observatories. Doug Bauer won 20x80 binoculars in the entry raffle! Unfortunately the weather was mostly rainy, but it was nice to be able to talk to experts. Gordon did some observing around 3am when it cleared briefly. Steve Harvath and Tony Licata said it was clear the Wednesday and Thursday before the main event, and they stayed at the lower camp site past the pond. Last year you observed till you couldn't stay awake any longer. Tony Licata won first place for 18 images he made during the year, and Jeff Thrush earned second place for his astro image.

The Sunset Mercury Transit (11/8/06 2:12 pm local (19:12 UT) - in front of the Sun at South Lyon Park. Greatest transit is at 5:41 pm local (12:41 UT), and fourth contact at 7:08 pm local (02:08 UT), well after sunset.

Harold Thomason raised \$2,300 for the fireman this year (\$13,000 total over 23 years). Gary Stahl reminded everyone on the FAAC astronomy club library. Don Summers donated over 100 books. Call Gary by the Monday before the Thursday club meeting if you want him to bring books for you (Gary will give his phone number to club members verbally, only). Gary is still seeking submissions for the club library, especially the imaging CD library, so please provide your digital images along with your name and details.

Dennis Salliotte reminded everyone that HFCC planetarium has resumed every Tuesday at 7 pm arrive early to ensure a seat. The University of Michigan – Dearborn observatory is completed and Eric Rasmussen has to pull you up to the top floor of the science building where they install a 16" refractor.

Congratulations for Don and Jan Klaser tying the knot. We all wish them the best of luck and a life of happiness together!

Finally, Tony brought in the projector, and Jon Blum gave his "Next Starry Night: How I bought an Orange Telescope" main presentation. Jon started with his 1st "Moonscope" 3" reflector telescope he received at age 12 which he still cherishes till this day, and he could observe the Moon, Jupiter, and Saturn. When Jon retired he upgraded to an ETX90 Goto, but he wanted something that would show deep sky objects as something different than a fuzzy small dot. Weight and aperture were his two main criteria for his next purchase: GEM = 29 lbs, 11", 3 hands (not chosen) vs. 1 Arm Next Star 8i = 24 lbs, 8", 2 hands (chosen). Next Star 8i = 605 ports then vs. 2100 port now; \$1399, 4500 objects. Upgraded to new 1x finder for bright objects, 2" diagonal close to base ramp. Ras Optic up/down voids Celestron warranty.

Jon found out AFOV is eyepiece dependent only; whereas TFOV is dependent on both telescope and eyepiece using $TFOV = AFOV / \text{mm of eyepiece}$. For a wider view Jon bought a focal reducer for 63% focal length and a 2" diagonal, since TFOV is limited by field stop or narrowest opening in optical path. He liked Orion 1x50 right angle finder for ease of looking through without contorting body. He also needed a Celestron power tank 17 battery with 17 amp/hr weighing 23 lbs.

Questions and comments included recommendations to purchase cheaper car jumper batteries of similar size, and the need for more battery power in cold weather. Ken commented on University Optics MK-70 Konig 40mm 70 AFOV aperture providing widest field of view for 2" eyepiece, and Televue Panoptic 24mm 68 AFOV providing largest field of view for 1.25" eyepiece with comfort for binoviewing.

The meeting was adjourned a little after 7:30 pm, but some members stayed until 8pm, picking up and ordering club attire.

August Meeting Minutes

Ken Anderson

August meeting minutes were not available for the September Star Stuff. Nonetheless, you may visit our Yahoo! Group (registered FAAC members only) to view the full version of the minutes. Look under the Meeting Minutes folder, under "Files" at groups.yahoo.com/group/FordAstronomyClub.

Brief summary of the August minutes (see full version for more information and details):

About 25 or so in attendance. Meeting officially started at 5:30 pm, 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.

Jon Blum's Tech Talk was "The Land of Midnight Twilight," from his vacation in Scandinavia; Alan Kaplan gave the main presentation, "Stellar Evolution," in 14 stages.

Ken Anderson gave the secretary's report and had the July minutes approved. Gordon Hansen gave the treasurer's report. Gordon mentioned the electronic newsletter cost avoided \$100/month, and is currently only \$10/month. We still have some 2007 Astronomy calendars for \$7 (vs. \$13 at newsstand). Dale Ochalek, our newsletter editor pointed out Star Stuff has the new logo.

Diane Worth talked about the club apparel status.

We temporarily lost the FAAC hotline (at next board meeting Bob FitzGerald informed us of the new FAAC Hotline number 248-207-2075).

Jim Frisbie reported the next Astro Image SIG meeting topic being Chuck Jones' "Trials and Tribulations." They are also getting a new SIG leader, starting in October (Tony Licata).

Gary Stahl reminded everyone about the FAAC club library. Bob MacFarland passed out the fliers and gave an update for the GLAAC Kensington September 29-30, 2006 10th Annual Astronomy on the Beach. Don Klaser advised everyone that FAAC will be supporting the 11th Annual Sally Ride Science Festival for 5th-8th grade girls on October 1, at Macomb Community College. The meeting adjourned around 7:30 pm.

(Bonus: extensive follow-up to Gary Strumolo's July Tech Talk on "Space, Time, and Relativity.")

Meeting Agenda - Oct. 26

5:30 pm

Opening/Introduction/Member Observing

New Members and Guests - Diane Worth

Tech Talk - What Did Galileo See? - Gary Strumolo

Presentation: "I'm Only Human" - Bob Berta - WAS

Club Business/Secretary/Treasurer reports

Club Projects/Committees/Member support

- GLAAC - Recap - Bob McFarland/All
- Astro-Imaging SIG - Tony Licata
- Sally Ride Science Festival - Recap - Don/Gordon/Ken
- Mercury Transit Event - Don Klaser
- Club Library - Garry Stahl
- Lifetime Memberships - Don Klaser
- Club Apparel Program - Diane/Gordon
- Open - All

Treasurer's Report

Gordon Hansen

Bank Accounts

Checking	\$	760.74
Savings	\$	3512.27

TOTAL Bank Accounts \$ **4273.01**

Cash Accounts

Cash Account	\$	132.76
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TOTAL Cash Accounts \$ **132.76**

Asset Accounts

GLAAC	\$	1642.36
Projector	\$	621.38
Scholarship	\$	188.05

TOTAL Asset Accounts \$ **2451.79**

OVERALL TOTAL \$ **6857.56**

Astro Imaging SIG

Tony Licata

The next meeting of the Astro Imaging SIG is Thursday, November 9, 5:30 pm, Roseneau Rooms A-B, at Henry Ford Community College in Dearborn, in the Administrative Services and Conference Bldg. (same as the FAAC General Meeting).

This time, I would like to poll the group, and find out what things we want to get out of the meetings. I'll also throw out a few thoughts of my own for discussion. The main presentation is TBD.

All Club members and their guests are invited. If you drive up to the Faculty parking lot gate, it should open, allowing you to park close to the building.

Sky Calendar

Jim Frisbie

October

- 22 Su New moon 1:14 am
- 24 Tu Moon passes 5 degrees south of Jupiter-pm
- 24 Tu Moon passes 1.4 degrees south of Mercury-pm
- 29 Su First Quarter moon 4:25 pm

November

- 5 Su Full moon 7:58 am Beaver Moon
- 8 We Mercury transits the sun, visible till sunset
- 12 Su Last Quarter moon 12:45 pm
- 12 Su Moon passes 1.6 degrees north of Saturn-am
- 17 Fr Leonid meteor shower maximum
- 19 Su Moon passes 6 degrees south of Mercury-am
- 20 Mo New moon 5:18 pm
- 25 Sa Mercury at Greatest Elongation west (20 degrees)
- 28 Tu First Quarter moon 1:29 am

All times in Eastern Daylight Time.

This information was obtained from the Henry J. Buhl, Jr. Planetarium in Pittsburgh, PA.

FAAC Events 2006

Bob MacFarland

October 28 - Beginner's Night - Island Lake

November 8 - Mercury transit viewing. South Lyon Park 2:12 pm local (19:12 UT) first contact.

Free Planetarium Shows

Dennis Salliotte

The FAAC, in collaboration with Henry Ford Community College, has recently resumed offering free planetarium shows to the public. These shows are held on Tuesday nights with the doors opening at 7:15 pm and closing promptly at 7:30 pm when the show starts.

Seating is on a first come, first served basis and the planetarium has a capacity of 48 people. The Fall Sky is currently being featured and this series of shows will continue every Tuesday night until Thanksgiving, with the exception of Halloween night.

These shows are being presented by the members of the FAAC Planetarium Team and by Eric Rasmussen of HFCC and U of M Dearborn. Eric is also offering everyone the opportunity to visit U of M Dearborn's new observatory after every planetarium show. The observatory's new 16" telescope has not yet been installed but brighter objects can be viewed from the observing deck through the university's 8" SCT if the sky is clear.

Several FAAC members have recently taken advantage of the free planetarium shows and/or visited U of M Dearborn's new observatory including Will Sopha, Dick Harris, Mike Best, Bob Clubb and others.

While planetarium shows are always fun to watch, some amateur astronomers find that they'd like to get a little more involved. If you've ever thought about learning how to operate a planetarium and would like to eventually help present shows, the opportunity to do so is available now.

Just send an email to dtsalliotte@yahoo.com (no spaces), post a message on the FAAC Yahoo group, or, call the new club hotline and leave a message, at 248-207-2075.

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 a visual back and diagonal.

Contact Dr. Nicolle Zellner, Albion College
nzellner@albion.edu

Meade ETX Spotting Scope 5-inch, Paragon Plus tripod, 26mm Super Plössl, 9.5mm Orion Epic, 13mm Orion Superwide Lanthanum. Nearly new, must sell. Could sell individually.

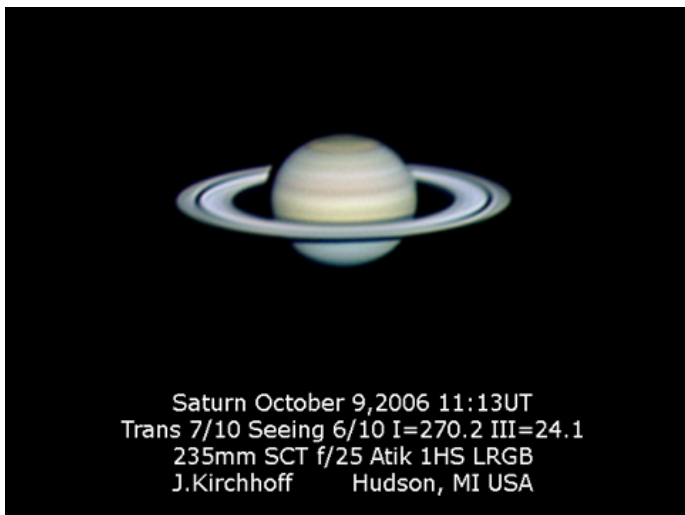
Contact Jack Fournier, 248-219-6222

Wanted: Meade Autostar II –
Need replacement hand paddle controller for Meade LX200 GPS.

Contact Dale Ochalek, dake00k@yahoo.com, 734-717-8810

Saturn Shot

John Kirchhoff



FAAC Wearables

Diane Worth

We will be submitting the last order for 2006, our FAAC Club Wares order, to be completed by the next meeting Thursday October 26th. Order items on or before this date for timely holiday season delivery.

View a complete listing of club apparel and accessories with sizes and pricing on our Yahoo! Group (registered FAAC members only) at groups.yahoo.com/group/FordAstronomyClub.

Otherwise, place your order directly with Gordon Hansen, our FAAC treasurer; email Gordon at FordAstronomy@comcast.com

The last FAAC Club Wearables order from the September meeting has just arrived, and will be at our next general meeting October 26th for pick up. Sorry, we can not offer delivery. Our patches have been ordered and will hopefully be available in December.

Items	Price
Ottoman, Polo Club Shirt	\$ 31.84
P.A. Black Sueded Hoodie	35.66
P.A. Legacy Jacket Black	41.81
Perlmutter, Flexfit Hat	14.05
P.A. Expandable Brief Case	18.29
Hatteras, Duffel Bag	38.43
Charles River, Bag-n-Blanket	36.52

Gladwin Gaze

Photos, as taken by Jon Blum at the Great Lakes Star Gaze at Gladwin, September 22-23 weekend.

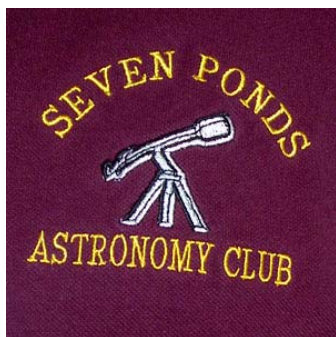


...continued on page 9

Gladwin Gaze... (continued from page 8)

Photos by Jon Blum

FAAC Star Gazers included – around from left front – Dennis Salliotte, Jon Blum, John Schroer, Doug Bauer, Bob MacFarland, (unnamed diner), Gordon Hansen, and Diane Worth.



Astronomy Swap Meet at the event offered both bargains and sales opportunities...



Ford Amateur Astronomy Club
Star Stuff Newsletter
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Rider's 9th Annual Moonlight Madness Sale!

Friday, October 27 – 7 pm to 11 pm

20% off – all non-discounted merchandise

**10% off – all discounted merchandise
(\$100 maximum discount)**

Save even more when you use your Rider's RED card!