



STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

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July 2007

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Continuing Journeys to the Final Frontier

President's Corner

Don Klaser, President, FAAC

For millennia, we have been gazing skyward in an attempt to understand what we were seeing. The arrival of the telescope in 1609 extended our ability to explore and understand. But it wasn't until the second half of the 20th Century that we were able to make another "giant leap" in realizing the true nature of those objects. The Mariner and Voyager missions of the 60's, 70's and 80's, Venera 7 on Venus in 1970 (USSR), the Apollo missions to the Moon, Viking 1 (1976) and Path-Finder (1997) on Mars and Galileo to Jupiter in 1995 help us.

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Omit Needless Bytes!

Patrick Barry and Tony Phillips

Now is an exciting time for space enthusiasts. In the history of the Space Age, there have never been so many missions "out there" at once. NASA has, for example, robots on Mars, satellites orbiting Mars, a spacecraft circling Saturn, probes en route to Pluto and Mercury—and four spacecraft, the two Voyagers and the two Pioneers, are exiting the solar system altogether.

It's wonderful, but it is also creating a challenge.

The Deep Space Network that NASA uses to communicate with distant probes is becoming overtaxed. Status reports and data transmissions are coming in from all over the solar system—and there's only so much time to listen. Expanding the network would be expensive, so it would be nice if these probes could learn to communicate with greater brevity. But how?

Solving problems like this is why NASA created the New Millennium Program (NMP). The goal of NMP is to flight-test experimental hardware and software for future space missions. In 1998, for instance, NMP launched an experimental spacecraft called Deep Space 1 that carried a suite of new technologies, including a new kind of communication system known as the

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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**. 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)

More recently, Spirit and Opportunity on Mars (2004), Cassini at Saturn (2004), and in 2005 the Huygens Probe landing on Titan, and the Deep Impact probe at Comet Tempel 1 showed us more. Last year saw the departure of New Horizons to Pluto, set to arrive in 2015.

But wait....there's more! Four upcoming missions, this year and next, will further broaden our knowledge of the universe. In August, the Phoenix mission will leave for a 2008 landing on Mars to search for water frozen beneath the surface, and possibly life of some kind. This month, missions dawn to explore two of the largest asteroids-vista and Ceres (now a dwarf planet), will be launched. Are they solid bodies or just orbiting rubble piles – we'll find out.

Japan and India will each contribute to our understanding with both the Selene mission to map the lunar landscape for future exploration (Japan), and Chandrayaan-1, also going to the Moon, in 2007 Selene will launch this month and Chandrayaan-1 in September. In 2008 NASA will launch the Kepler spacecraft, which will search distant stars hoping to discover Earth-sized planets that may be orbiting them, and if they might be inhabitable.

The future of discovery in our universe is only beginning, so stay tuned – you never know what we'll find!

Reminder, FAAC Library Open!

The FAAC Library is hosting an open house for all FAAC members, from 4:00 until about 5:15 pm, before next meeting, Thursday July 26. Library is in Room 109 of the HFCC Science Building (same building the planetarium). Enter the building from the courtyard, go up the stairs and turn left, and go down the hall a bit – and visit, or browse!

The lending period is from meeting to meeting, although this is extendable, providing the book is requested by another member. Please contact me 48 hours prior to a meeting to arrange library use. Also, review a list of the library holdings on the FAAC Yahoo Groups web site, in the File section:

groups.yahoo.com/group/FordAstronomyClub

— Gary Stahl

Needless Bytes... *(continued from page 1)*

Beacon Monitor. The system leverages the fact that for most of a probe's long voyage to a distant planet or asteroid or comet, it's not doing very much. There's little to report. During that time, mission scientists usually only need to know whether the spacecraft is in good health.

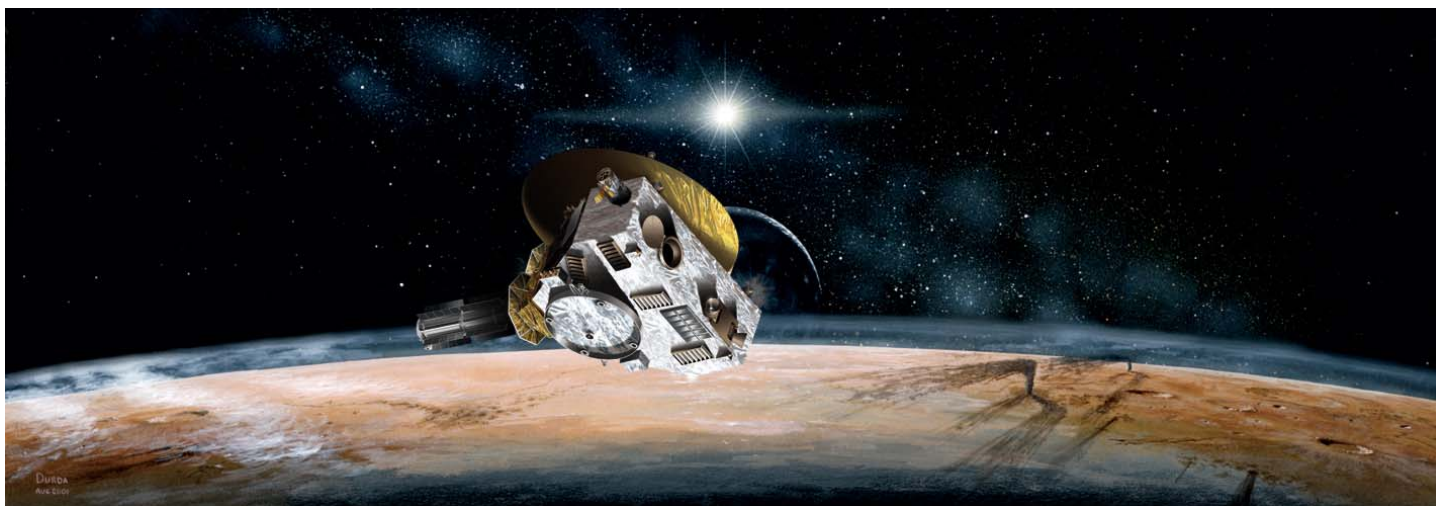
"If you don't need to transmit a full data stream, if you only need some basic state information, then you can use a much simpler transmission system," notes Henry Hotz, an engineer at NASA's Jet Propulsion Laboratory who worked on Beacon Monitor for Deep Space 1. So instead of beaming back complete data about the spacecraft's operation, Beacon Monitor uses sophisticated software in the probe's onboard computer to boil that data down to a single "diagnosis." It then uses a low-power antenna to transmit that diagnosis as one of four simple radio tones,

signifying "all clear," "need attention whenever you can," "need attention soon," or "I'm in big trouble—need attention right now!"

"These simple tones are much easier to detect from Earth than complex data streams, so the mission needs far less of the network's valuable time and bandwidth," says Hotz. After being tested on Deep Space 1, Beacon Monitor was approved for the New Horizons mission, currently on its way to Pluto, beaming back a simple beacon as it goes.

Discover more about Beacon Monitor technology, as well as other technologies, on the NMP Technology Validation Reports page, <http://nmp-techval-reports.jpl.nasa.gov>.

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



This artist's concept shows the New Horizons spacecraft during its planned encounter with Pluto and its moon, Charon. The spacecraft is currently using the Beacon Monitor system on its way to Pluto. Credit: Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute (JHUAPL/SwRI).

Beginner's Night Perfection

John Kirchhoff

Our Beginner's Night at Island Lake for July was held under mostly clear skies and temps in the low to mid 60's. In short, a perfect Saturday night for observing! We had a nice crowd of 50 or so club members and guests with lots of telescopes.

We had a surprise visitor shortly before sunset when a UFO (OK, it was a weather balloon) put in an appearance slightly below a first quarter moon. The balloon, with its instrument package tethered underneath, was visible for 10 minutes or so

before the envelope ruptured and sent the payload to a soft landing somewhere near Monroe. The balloon was about the angular size of Jupiter – 40 arc seconds (would anyone know the size of balloon the weather service uses and based on the information just how far away our UFO was from Spring Mill Pond?).

We had our last peek at Venus for Beginner's Night 2007. It is a large waning crescent and has

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Beginner's Night ... *(continued from page 3)*

lost a lot of altitude over the last month as it heads for inferior conjunction on August 17th. Jupiter has become the summer planetary showpiece with its lineup of moons and abundant cloud detail. The Southern Equatorial Belt (SEB) has all but disappeared and makes the planet look awfully strange in the eyepiece.

Photos submitted by John Kirchhoff



Tom Jankowski lining up the moon...

George Korody, Bob MacFarland, and Jupiter keep our guests entertained!...



June 22 Meeting Minutes

Ken Anderson

Attendance: 27+

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.

We welcomed guest Heather Swan. Dick Harris saw 6th magnitude asteroid Vesta in 10x50 binoculars. In addition to tracking asteroid Vesta, Ken Anderson tracked the International Space Station (ISS) trailing the space shuttle in his 17.5" Dobsonian, and could actually see the dim orange rectangular solar panels on both sides of the "H" with bright white "circular" central habitable area. Jim Frisbie and John Kirchhoff also saw the space station and shuttle with the help of spaceweather.com, and took photos with the shutter open all the time on his Cannon 10D. Both Jim and Ed Halash had advice on using checklists and bringing eyepieces (being semi packed and ready to go), based on their lessons learned this month. Jon Blum observed from both Illinois and Richmond with ten other club members. Although it usually gets foggy at Richmond in the grass, it usually clears up as the night gets cooler. Finally Dick Harris observed Vesta in June at Richmond, a bright yellow meteor for 1 second about 20-30 degrees high, and the ISS 30 degrees high.

Jim Frisbie gave the Technical Talk "Electrical Safety." Some astronomy equipment may be conductors, such as metal telescopes, metal tripods, metal diagonals, and metal eyepieces. There is a potential for electrocution with metal equipment, 120 volts ac, inverters, extension chords with power strips, equipment getting wet from dew/fog, and then the astronomer grabs the metal focusing knob or looks through the metal eyepiece. To prevent electrocution, Jim recommends using 12v power packs (NOT 120 vac), and getting 12v devices and drive controller (or converting them to 12v if possible). This includes his camera, drive motor, old laptop computer (functions at 12v, even though it will not charge at 12v), and Kendrick dew heater. If using cigarette lighter adapter to convert, you will need to confirm polarity!

But 12v is not without problems. Sealed lead acid 12v Batteries must keep their charge above 11.7 v, so regular charging is required. Auto battery chargers are not recommended. Charging may

take 24 hours, but astronomers may not have 24 hours notice, and may desire to be ready to go. Jim's solution is to use only AGM batteries and use solar panel charging though a charge controller. His pulse width modulation (PWM) charge controller has six ports (in parallel), and senses the voltage of each battery to charge the ones which need charging the most.

When solar charged, batteries remain at approximately 13.05v. Once disconnected, voltage drops to about 12.85 v 1.5 days later, and 12.8v four days later. After a month of being disconnected they may never fully recover, if they go below 11.7v. Jim consumes 4 amp/hours and has 8 hours of maximum use (18+16=34 amp hour capacity). Others who do not want to use solar charging may use wall socket charging on a timer, or just charge one night/week, to prevent over charging. AGM batteries can also be used for jumping cars. These are different than flooded sulfuric acid batteries, similar to common car batteries, which require a different charging strategy.

Heather Swan, a graduate student from the University of Michigan, gave the main presentation "Blast from the Past: Observations of Gamma-Ray Burst and Other Transients." The primary purpose of the ROTSE telescope is to immediately track and observe the longer term visual aftermath of extremely short term gamma ray bursts. Satellites are required for finding gamma ray bursts, since the Earth's atmosphere blocks and protects life from these damaging gamma rays. VELA satellites, used to detect violations of nuclear testing, were the first to detect the existence of these Gamma Ray Bursts (GRB).

One surprising aspect is they always looked different as far as time, magnitude, and frequency. They plotted histograms, and noticed they fell primarily in two groups: 40 at 0.1 second, and 60 at 10 second durations (note these are the two peaks, with much lower quantities durations between and beyond these limits). Since the duration of GRBs are extremely short they looked in that direction at other wavelengths to see the remnants. Optical and X-Ray can last up to a month, sometimes more, sometimes less. The jet of the GRB is what is picked up by the satellite. If it is short duration they believe it originated from two neutron stars merging into a black hole. If it is long duration,

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

they believe it is a massive star going hypernova. The second oldest GRBs occurred in the first billion years of the universe. It has been calculated to be 12.7 billion light years away from us, and the age of the universe is estimate between 13-14 billion years old.

The Swift Satellite covers a quarter of the sky in its' scan to detect GRBs. If it finds one, within seconds it send a signal back to Earth, and Robotic Optical Transient Search Experiment (ROTSE) telescopes observe in other wavelengths from around the world (Ft. Davis, USA; Bakirlipe, Mediterranean/Europe; Mt. Gamsberg, Africa; and Australia). The Swift telescope also maps the gamma ray sky. The 45 cm (18") diameter ROTSE telescopes are all optical and unfiltered. Their field of view is 1.8 deg x 1.8 deg, and they use a 2K by 2K CCD. They are fully automated and run by Linux. They can track a GRB remnant within 6 seconds after being detected by the Swift Satellite. Swift detects two GRB a week. One third of ROTSE's observing time is dedicated to imaging GRBs, or taking 500-1000 random images per night in hopes of finding potential supernovas.

Unlike our amateur telescopes who value rock steady images, the ROTSE telescope intentionally jiggles between images to prevent burned out CCD cells. Over 2 million images have been taken to date. All GRB images are put in separate folders based on when they were detected within six seconds. A GCN circular is put out if a GRB is confirmed optically. Alternate uses for ROTSE:

1. Orphan afterglows (GRB without the burst of a gamma ray)
2. Supernova search
3. "Unofficial" Messier photo catalog (appears professional astronomers have amateur hobbyists in their mist). Heather provided some 8"x10" ROTSE Messier Catalog handout posters her colleague made (in Thai, but we can still read the numbers, and know what they are). She also sent the file to Ken Anderson, but unfortunately it was too large to put on the Yahoo website.

Next Heather showed us plotted results of ROTSE III optical light curves (red) vs. Swift Y-ray gamma (blue) and X-ray (pink) for a specific GRB. The logarithmic X axis is the time since burst from 5 to 10,000 seconds. The Y axis is flux from 10⁻¹² to 10⁻⁷ erg cm⁻² sec⁻¹. The gamma ray

starts at the top left of the plot at 5 sec and has a slight jump to peak 10⁻⁷ erg cm⁻² sec⁻¹ flux (varying slightly), around 20 seconds flux starts to steadily decrease, and around 60 seconds the gamma ray curve ends and the X-ray continues the smooth decline till 10⁻¹² erg cm⁻² sec⁻¹ flux. ROTSE sees between the end of the gamma ray (10 sec) and beginning of the X-ray (100 sec) time period, but at a much lower flux, starting halfway down the plot. It has the same declining slope parallel to the continuous Gamma ray/X-ray curve and terminates at 100 sec and 10⁻¹² erg cm⁻² sec⁻¹ flux.

In conclusion Heather reminded us all the importance of reporting new discoveries. Her ROTSE telescope was the first to see supernova SN 2006 gy, but they did not get credit because Berkeley issued a press release without giving credit. She showed the supernova plot of Days since Explosion (logarithmic X axis) vs. Brightness (logarithmic Y axis). SN 2006 gy peaked at a brightness of 100 from 100-several hundred days after explosion, and dropped to about a brightness of 30 at the far right of the plot. Type 1A supernovas typically peak at 25 brightness at 10 days and drop fast to 0.1 brightness at 1500 days. Type II supernova peak at 1 brightness and drop to 0.5 at 1500 days. Supernova 1987 peaked at 0.9 brightness and dropped to 0.4 at 2000 days. We wish Heather the best of luck: graduate school at University of Michigan, and finding her ideal career afterwards.

Don Klaser led the business portion. Ken Anderson gave the Secretary's Report. John Schroer commented on some minor spelling issues; but overall the minutes, found on both the web and newsletter, were approved. Gordon Hansen gave the Treasurer's Report totaling \$6180.40 (FAAC Only, excluding GLAAC), plus \$1866 for GLAAC. Doug Bauer (and Harold Thomason) gave the Equipment Manager's Report. Doug passed out and discussed the new Process and Rules which he wrote, and can also be found in last months Star Stuff and on our club website. Harold is the actual Equipment Manager, responsible for keeping track of who has the equipment in "virtual storage" of last user. FAAC currently has Yamaha Stagepas 300 sound system, laptop, projector, and screen for presentations, and will be buying a wireless microphone, and canopy/tent. We are also looking for a missing donated 8-10" dobsonian

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Meeting Minutes... *(continued from page 6)*

which was lost 5 years ago. Next Don led the club through events, listed in chronological order, plus generic reminders at the end:

June 30th and July 1st Venus and Saturn will be approximately only 0.47' apart and visible in the same wide eyepiece view till they set around 11:30 PM. Some talk informally about going to Island Lake.

The FAAC Board meeting is the first Thursday of each month (July 5) at Dimitri's Restaurant in Dearborn, MI. Of special interest is discussing a policy for letting people out of Island Lake at our Beginner Nights with officer in charge and bull horn/megaphone. George Korody will be asked to attach the FAAC lock to the FAAC box via cable/chain, to minimize human error of switching locks. To prevent Jim showed the Board the new FAAC 10' x10' canopy with sides. The board voted to order a new 6' x 2' "table sized" colored logo banner. Gordon will investigate large colored stenciled logo T-shirts and non-hooded sweatshirts.

SIG meetings are every second Thursday of each month. The next meeting is July 12 at HFCC Rosenau conf room, topic TBD.

The next FAAC Beginners Night is July 21 at Island Lake State Park Spring Mill Pond Site. Don Klaser and Jim Frisbie will be co-officer's in charge, implementing a new policy for informing guests with a bull horn/megaphone when the gate will be opened or FAAC club members are leaving, so guests can be let out without having to wait long at the gate.

FAAC meetings are every fourth Thursday of each month. The next meeting is July 26 at HFCC Rosenau conf room, Main Presentation is TBD.

FAAC at Meadowbrook will take place on Saturday July 28. This will compliment the Detroit Symphony Orchestra's (DSO) Beethoven concert. Don Klaser, Bob & Holly MacFarland, Ken Anderson, and Gordon Hansen have volunteered to attend and support the event with telescopes. If you would like to volunteer with solar or night telescopes, please contact Don Klaser so he can add you to the official list.

FAAC Library open house 1 hour before meeting HFCC Science Center Conf Room 109 – Gary Stahl, FAAC Library Open House 4pm July 26.

List of 100+ books and brief description is available in FAAC Yahoo site, which can be signed out for one month with extensions allowable. There are an additional 20+ still to be cataloged books. Gary recommends a courtesy e-mail a day before the meeting. President and V.P., Don Klaser and Doug Bauer, are backup key holders for returning books.

The 2nd Annual SESMA/FAAC Picnic at Richmond Saturday August 11 2 pm and (backup date next day, for inclement rain - not clouds). New date was selected for both the New Moon and Perseid Meteor Shower. FAAC has provided \$300, and is seeking FAAC volunteers to help (cook, clean up, etc.). Glider flights (\$30-\$50 estimated) and solar observing available during the daytime. Night time fireworks and surprise-post FAAC laser show (bring red or green lasers, but don't shine at any airplanes). Bring lawn chairs, table, and side dish/desert to pass, but NOT main dish.

FERA Lions, Tiger, and Bears at the Detroit Zoo August 25, 10 am-4 pm, \$5 per person, send reservation requests and check to Bob Hainline (b.hainline@comcast.net) by July 30. You may need to be a Ford employee/retiree to purchase tickets for your "immediate" family.

FAAC Dark Sky Workshop September 5-11 at Gladwin, Michigan being coordinated by Tony Licata, Jim Frisbie, and Gordon Hansen. Dark Sky Star Imaging Workshop is \$15 for club members and families (not public in general). It's \$5 tent/day to camp on hill. Hill is free for those camping in the park (~\$29/day RV Park fee). No campers or RVs allowed on the hill. Advance registration to FAAC ends August 15. Sites are first come first serve. FAAC will coordinate porta-potty and path lighting down hill to RV area. Event ends 30 hours before Great Lakes Star Gaze, and attendees must leave hill morning of August 12 for lane marking (FAAC can not claim best positions for GLSG5), etc. Discuss, learn, image. Not exclusively for imaging. Speaker(s) everyday, but clustered around weekend. See handout on FAAC website in files. For additional information contact Gordon Hansen at GordonH2006@comcast.net or Jim Frisbie at w8tu@comcast.net.

Great Lakes Star Gaze (GLSG5) is September 13 (5 pm)-16 at River Valley RV Park in Gladwin, MI. Send e-mail with completed registration form to jenferrobb@gmail.com, send fees, postmarked

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Meeting Minutes... *(continued from page 7)*

before August 24, to avoid \$15 late fee. Prices vary depending on individual or family, two or three nights, RV (Park Fees) plus trailer. Sites are first come, first served.

September 15 is Astronomy Day 2, with Eric Rasmussen and Mike Lapresto having the HFCC Spring Planetarium Show, and Tour the "scaled" Solar System Walk (similar to that in Washington D.C.). The club is looking volunteers (not attending GLSG5) to help Eric at HFCC and U of M-D, and/or set up complimentary events at the U of M-D parking lot, Island Lake, etc. depending on club member interest (DSC will not be participating). Eric is also checking into opening the University of Michigan-Dearborn Observatory, but there are a lot of politics involved. This event was requested from the Astronomy League to determine if the Spring or Fall is better for celebrating Galileo's 500th anniversary in a few years.

GLAAC Astronomy on the Beach (AOTB) is September 21-22, at Kensington Metropark for the general public. Bob Fitzgerald reported in Bob MacFarland's absence. Solar observing earlier, 6 pm official start (6:30 pm first show). John Schroer coordinating main guest speaker who most likely will speak about the Hubble Space Telescope, and the flier will be published as soon as the featured speaker and topic is confirmed. Supporting presenters have all agreed. Gordon Hansen plans to do Astronomy 101 for Adults on Friday, and new Astronomy for kids on Saturday, but he can change depending on the audience. Ms. Ardis Harold from Gross Point North High School will have radio astronomy static displays, but their new radio antenna is not portable. Mark Deprest will be setting up two portable planetariums. New this year to encourage equipment setup even with cloudy weather, Televue/Meade/Orion will provide donation raffles for telescope volunteers who actually set up. John Kirchhoff is coordinating with vendors. Frank Ancona is the Meade 4M Club Liaison for the Meade 4M Banner. Greg Ozimek is the Celestron contact. GLAAC will have new concession vendors this year. 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 is proposing changing the pavilion lighting for this year, but there is talk about the pavilion being torn down

next year to expand the water park. Kensington Metropark is seeking recommendations for a new pavilion (next year), acknowledging that GLAAC AOTB brings in more people than any other single event at the park. Next GLAAC Planning Meeting is Sunday July 1 at 1 pm at Nature Center. Contact Bob MacFarland or Bob Fitzgerald for details or future meetings.

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. Please contact Gordon if interested.

Seeking 2007 speakers for either FAAC the 30-60 minute main presentation, or 15-20 minute Tech Talks. Contact Don Klaser at 586-596-9510 or dklaser4750@wowway.com.

Meeting Agenda - July 26

5:30 pm

Opening/Introduction/Member Observing

New Members and Guests Diane Worth

Tech Talk: Digital Star Atlas Demonstration - John Schroer

Presentation: Texas Star Party - 2007 - John Schroer

Club Business/Secretary/Treasurer reports

Club Projects/Committees/Member support

- Scholarship Fund - Ed Halash
- Astro-Imaging SIG/Dark Sky Workshop - Gordon Hansen, Jim Frisbie
- SEMSA/FAAC Picnic – August 11 - Ed Halash
- GLAAC/AOTB - September 21 & 22, 2007 - Bob MacFarland
- Astronomy Day II - September 15 - Don Klaser
- Observing Sites Policies and Procedures- Don Klaser
- FAAC Swap Meet – 2008 – Tom Blazcak, Don Klaser
- Club Wearables - Gordon Hansen
- Open discussion - All

FAAC Events 2007

Bob MacFarland

July	28 – Detroit Symphony Orchestra night
August	11 – Sand Hill / FAAC Picnic
	18 – Beginners' Night, Island Lake Recreation Area
September	5-11 – Astro-Imaging Workshop, Gladwin
	14-15 – Great Lakes Star Gaze, Gladwin
	15 – Astronomy Day II
	21-22 – Astronomy on the Beach – GLAAC, Kensington Park
October	20 – Beginner's Night - Island Lake

Treasurer's Report

Gordon Hansen

Bank Accounts

Checking	\$	110.19
Savings	\$	4,341.79
TOTAL Bank Accounts	\$	4,451.98

Cash Accounts

Cash Account	\$	52.39
TOTAL Cash Accounts	\$	52.39

Investment Accounts

Certificate of Deposit	\$	1,001.08
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Asset Accounts

Equipment	\$	313.95
Scholarship	\$	361.05
TOTAL Asset Accounts	\$	675.00

OVERALL TOTAL	\$	6,180.45
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Memo:

GLAAC	\$	1,866.81
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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

SkyWatcher 120mm refractor, f8.3 F/L 1000mm. Comes with tube rings and 2in -1.25 adapter. Good condition, sharp-contrast views. Great for planets and brighter deep sky objects. Killer double-star splitter. Asking \$225.00
Contact Michael, 734-777-3605 or email: mharri1000@netzero.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 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

Televue Pronto 70mm refractor. Includes the carry case/bag and the Televue diagonal to go with it. Excellent condition. Asking \$625 for the telescope and accessories.

Please contact me through e-mail.
Tom Blaszak, key_string_guy@yahoo.com

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

Contact Clay Kessler, ckessler@gatecom.com.

Astro Imaging SIG

Tony Licata

The next meeting of the Astro Imaging SIG is Thursday, August 9, 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 September 5th-11th, at River Valley RV Camp in Gladwin, MI. See Flyer in this newsletter.

New Members

Gordon Hansen

The FAAC acknowledges and welcomes these new members in 2007. Let us know how we can help you enjoy amateur astronomy:

- Mike Adamson
- Loretta VanAntwerp

GLSG5 - Reserve Your Spot

Jenifer Robb, SAS

The universe is expanding, and so is our observing hill and observing nights!

The Fifth Annual Great Lakes Star Gaze will be September 13th – 16th, 2007, at River Valley RV Park, Gladwin, MI (www.rivervalleyrv.com). A flyer and registration forms and information can be found on the Sunset club (SAS) website at www.boonhill.net/sunset. Return the registration and fees, postmarked before August 24, to avoid a late fee.

This year's event has been extended by one day, and features an expanded observing field as well.

This is a star party for the astronomer who loves to observe and mingle with other astronomers. Limiting magnitudes are estimated to be around 6.5 at zenith with some minor light domes from the cities of Mt. Pleasant and Midland, some 30 miles away. Some practical and interesting talks are scheduled, to enhance your experience.

Food, photo contests, door prizes, and much, much more!

See you there!

Photo composite by John Kirchhoff

Comet Linear





DARK SKY WORKSHOP

Hosted by
Ford Amateur Astronomy Club (FAAC)

Wednesday, Sept. 5th thru Tuesday Sept. 11th 2007

River Valley RV Park, 2165 S Bailey Lake Avenue, Gladwin, MI 48624
 Camp Phone: (989) 386-7844, Website: <http://www.rivervalleyrv.com>

WORKSHOP:

The Ford Amateur Astronomy Club, Astro Imaging Special Interest Group is sponsoring a Dark Sky Workshop. All club members and their guests are invited to come out and spend a week with friends, under mag 6.5 skies. You don't need to be an imager to attend.

EVENTS AND ACTIVITIES:

The purpose of the Dark Sky Workshop is to offer FAAC members and friends time to mingle and engage in astronomy related activities. The main event of course will be the nightly observing and imaging on the hill, under clear dark skies. (We guarantee the "dark" part.) By day, we hope to set up a learning atmosphere around topics like imaging techniques, equipment, software, and so on. A more precise schedule of events will be forthcoming, as plans are finalized.

Workshop Fee: \$15 for the week plus...

- **Tent Camping** (on observing hill) - **\$5.00 / night**
- **RV Site** (water & elec.) - **\$29.00 per night** (Please book and pay for your RV site directly with the campground)

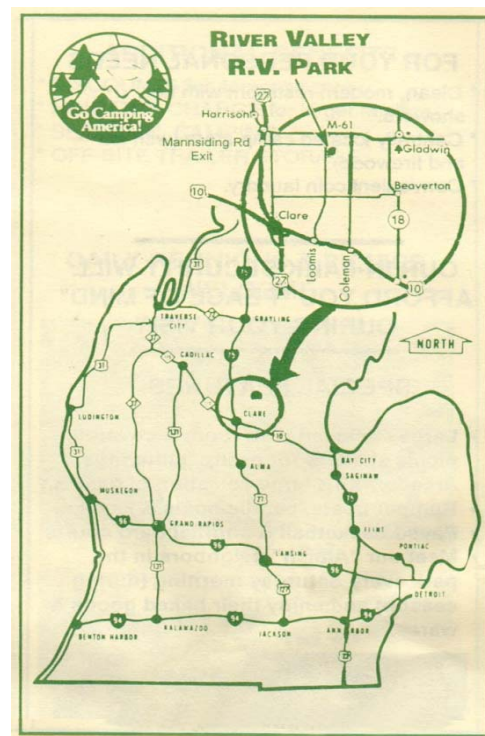
Advanced registration ends August 15. Please add your name and info to the Sign Up Sheet in the Database Section of the Yahoo Site. Please send \$15 payable to FAAC at address indicated below. Please include: Name, Address, Phone Number, E-mail, and Number of Guests

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

Please note: Our event will be followed one day later, (September 13), by the Great Lakes Star Gaze, which is at the same site this year. If you plan to stay on for that, you may be asked to vacate the hill for a time while they lay things out. Star Party etiquette would be appreciated!

We are looking forward to seeing you there!

For More Info Contact: Gordon Hansen: GordonH2006@comcast.net or (734) 675-6137,
 or Jim Frisbie: w8tu@comcast.net or (734) 453-1422



Ford Amateur Astronomy Club
Star Stuff Newsletter
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