



★ STAR STUFF ★

The Newsletter of the Ford Amateur Astronomy Club

August 2004
Volume 13 Number 8



Editor: Jim Frisbie

A MESSAGE FROM THE PRESIDENT

Let's Get Things Cleared Up!

It's August, already, and it seems you can count the clear nights we've had so far this year, on one hand. Thus most of the faithful have been doing without an astronomy fix, out of necessity. The truth is, this year has been a little less than ideal for us Michiganders, even moreso than usual.

Latest in the parade of evenings undone, due to the overhanging meteorological mist, was the Perseids meteor shower, peaking on the 11th and 12th of August. We are left to ponder other astronomical outlets; luckily, the space program has been busy helping us out, weather or not.

First, the Mars rovers, Spirit and Opportunity, have been on the surface of Mars since the January arrivals, heroically sustaining the effort of digging up data, and evidence of a possible water presence, and perhaps the best hope in the solar system, of finding extra-terrestrial life. Much of the operation continues today because of makeshift, specially-devised commands which combat the many problems caused by ever-deteriorating hardware systems aboard the rovers. Even now, they are being guided to "hotspots," to help them withstand the coming Martian winter.

Cassini finds its new home in July, after a 7-year trek, and is orbiting the environs of Saturn. While the mission holds great promise over the length of its mission, even now, the return is bountiful. Cassini, for example, just enabled discovery of two new moons, possibly the smallest moons found to date; the moons are about 3 and 4 kilometers (2 and 2.5 miles, respectively) across.

The Mercury Messenger, The MESSENGER, or MErcury Surface, Space ENvironment, GEOchemistry, and Ranging, mission, lifted off on Aug. 3, and will hopefully reach Mercury in March of 2011. The craft will spend a year mapping the entire surface, and conduct observations to determine, among other things, whether the planet is shrinking! Of course, expect some dazzling photos – cameras aboard the MESSENGER will resolve surface features down to 60 feet across.

The Hubble Space Telescope, astronomy's foremost instrument and best friend, remains the biggest dilemma. The Hubble never has had to contend with anything like a gray sky, of course, or so much as a drop of dew. However, as the mission goes on, more and more repairs are required, with perhaps less likelihood each day, that the wherewithal to complete these needed repairs and upgrades will exist. Of late, the Hubble's Imaging Spectrograph, was installed in 1997 and was designed to operate for five years, has suffered technical problems, and engineers are racking their brains on a solution. The Imaging Spectrograph has helped astronomers better explore black holes, newly forming stars and the more distant galaxies

Back here on earth, we're hoping for better luck at our next Star Party / Beginner's night, on Saturday, September 11, at Island Lake. It's our 12th annual, though a smaller event than in years past. We've toned it down a bit this year, with a bigger effort made at the GLAAC party earlier in the year. Still, it will be nice to get together, for a picnic, and/or studying the stars. Refer to the flyer included in this newsletter. Hope to see you there!

Dale Ochalek

Ford Amateur Astronomy Club
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Dearborn MI 48121-7527

<http://www.boonhill.net/faac>

Submissions to STAR STUFF are welcome Please write to the address above or contact the editor:

Jim Frisbie
via tele #: 734-453-1422
or email: w8tu@comcast.net

Dead line is the 15th of each month of publication.

Officers:

President	Dale Ochalek
Vice President	Don Klaser
Secretary	Bob McFarland
Treasurer	Gordon Hansen

General Meetings:

The Ford Amateur Astronomy Club holds regular general meeting on the fourth Thursday of each month (except the combined November/December meeting held the first Thursday of December) at 5:00 PM at the Ford Motor Credit Building off Mercury Drive near Michigan Ave. in Dearborn.

Observing:

The Ford Amateur Astronomy Club observes at Spring Mill Pond within the Island Lake State Recreation Area near Brighton, Michigan. The club maintains a permit for after-hours access. Weather permitting, the club observes on Friday nights, Saturday nights, and nights before holidays.

Club Information:

Observing schedules and additional Club information is available by calling the Observing Hotline at: (313) 390-5456 or via the Ford Intranet: www.be.ford.com/astro/faac.html or the public Internet: www.boonhill.net/faac.

Club Membership:

Membership in the Ford Amateur Astronomy Club is open to Ford employees and non-employees. Write or call for an application.

Annual - New Member: \$30; Renewal: \$ 25 (before Jan 31 of each year); \$15 for new members after July 1.

Lifetime - \$ 150

Membership includes:

Discounts on ASTRONOMY and SKY & TELESCOPE magazines, after-hours access to the observing site and discounts at selected area equipment retailers.

Magazine Discounts:

Do not send money to FAAC for SKY & TELESCOPE or ASTRONOMY magazine subscriptions. We have a form that you send in with your subscription directly to the publisher to receive a \$10 discount. Pick up a form at the next meeting, or contact a club officer.

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***** NEW MEETING LOCATION - AT HFCC *****

FAAC general meetings are now held at Henry Ford Community College, effective July 22, 2004. We will meet in the Roseneau Conference Rooms at the Administrative Services and Conference Center. See the map on page 7 for directions to the meeting at HFCC. Use of parking lot J or H is recommended.

Ed Halash led the successful effort for FAAC, in arranging for the new location, and Charles W. Jacobs, Ph.D., Associate Dean of Science at HFCC, is our contact. We begin a new association with HFCC, and welcome participation of students and public, as usual. The location at HFCC allows free access for members, and the further advantage of possible future use the of HFCC's planetarium facility.

FOR SALE: Meade 16" Starfinder Dobsonian (Big Ed), Meade Magellan I digital setting circle, Custom detached wheeled base, 7 Celestron, Meade, TeleVue, & Orion eyepieces with adapters, 5 filters and case. \$999.00 Contact Dan Kmiecik at 313.608.0181 or email at onyonet@yahoo.com

MINUTES OF THE JULY 22 FAAC GENERAL MEMBERSHIP MEETING

By Bob MacFarland

Don Klaser opened the meeting at 5:00 pm by welcoming everyone to the new location (at the Henry Ford Community College) and then asking for a round of introductions from the 44 attendees in the room. This included the **Taylor family (Jeff, Bonnie and Tracy)** who were attending a FAAC general membership for the first time.

Don then introduced **Dr. Charlie Jacobs** to the club membership. **Dr. Jacobs**, who is chairman of the Physics department at the school, welcomed everyone to the HFCC campus

and pointed out how he was looking forward to building a lasting relationship with the Ford Amateur Astronomy Club membership. Some of the areas he would like to explore with the club included, the formation of a HFCC student astronomy club, potential demonstrations or meeting use of the HFCC planetarium, the promotion of astronomy public awareness events and others.

Gordon Hansen detailed the status of the club treasury (found elsewhere in this issue) and the minutes of the June 24th meeting (courtesy of **Don Klaser**) were accepted without change. **Gordon Hansen** then awarded the second of two FAAC annual college scholarships for \$200 to **Tracy Taylor**. **Tracy** and her family were very appreciative of the gift and planned to apply it towards tuition and books at the Michigan State University in September.

Bob MacFarland reviewed how the FAAC display for the FERA Nautical Extravaganza fared at the Ford Scientific Research Laboratories on June 24th. Special thanks go out to **Mike Bonner** and **Bob Fitzgerald** for supporting it with their expertise and equipment.

Bob also reviewed how **John Schroer**, **Bob Fitzgerald**, **Don Klaser** shared in covering some of the achievements required for the Webalos Astronomy badge on the evening of June 26th at Island Lake. (Unfortunately for all, that night, the Michigan nebula won out again – we will try to finish the visual requirements at the September 11th Beginner's Night outing). 14 cubs from the Farmington Hills area attended.

The club then discussed various scenarios for a season ending star party in September. A motion was made to take it back to the Board meeting for resolution. It was passed.

Having concluded the business portion of the meeting, **Don** introduced **Gary Strumolo** who gave his tongue-in-cheek mathematical dissertation on how the lunar crater named after Archimedes may have been the wrong one. All enjoyed it.

Greg Burnett then presented his new digital version of the **Astronomy 101**, which had many contemporary dynamic and static digital enhancements, which were combined to make it even more impressive than the original slide version. This digital presentation media format allows this message to more easily updated and modified to better suit this changing science and the venues at which it is being presented. **Greg's** original **Astronomy 101** presentation has been the mainstay of our club's public awareness efforts over many years. Hundreds of people have enjoyed this tour of the heavens at girl and boy scouts camps, public and private schools, local and state parks, astronomy classes, ILSP and GLAAC public star parties, and other venues. I'm certain that the new Astronomy 101 will excite crowds for many more years to come.

TREASURERS REPORT July 22, 2004

By **Gordon Hansen**

Bank Accounts

Checking \$ 309.14
August 2004

Savings	\$ 981.13
TOTAL Bank Accounts	\$ 1,290.27
Cash Accounts	
Cash Account	\$ 81.90
TOTAL Cash Accounts	\$ 81.90
Asset Accounts	
FERA Ticket Sales	\$ -
GLAAC	\$ 795.00
Projector	\$ 421.20
Scholarship	\$ -
Swap Meet	\$ -
TOTAL Asset Accounts	\$ 1,216.20
	=====
OVERALL TOTAL	\$ 2,588.37



WAITING FOR CASSINI'S "SAFE ARRIVAL" CALL

By **Diane K. Fisher**

The evening of June 30, 2004, was nail-biting time at Cassini Mission Control. After a seven-year journey that included gravity assist flybys of Venus, Earth, and Jupiter, Cassini had finally arrived at Saturn. A 96-minute burn of its main engine would slow it down enough to be captured into orbit by Saturn's powerful gravitational field. Too short a burn and Cassini would keep going toward the outer reaches of the solar system. Too long a burn and the orbit would be too close and fuel reserves exhausted.

According to Dave Doody, a Cassini Mission Controller at the Jet Propulsion Laboratory (JPL) in Pasadena, California, there was a good chance the Earth-bound Cassini crew would have to wait hours to learn whether or not the burn was successful. Of the three spacecraft-tracking Deep Space Network (DSN) complexes around the globe, the complex in Canberra, Australia, was in line to receive Cassini's signal shortly after the beginning of the burn. However, winds of up to 90 kilometers per hour had been forecast. In such winds, the DSN's huge dish antennas must be locked into position pointed straight up and cannot be used to track a tiny spacecraft a billion miles away as Earth turns on its axis. "The winds never came," notes Doody.

The DSN complex at Goldstone, California, was tracking the carrier signal from Cassini's low-gain antenna (LGA) when the telltale Doppler shift in the LGA signal was seen, indicating the

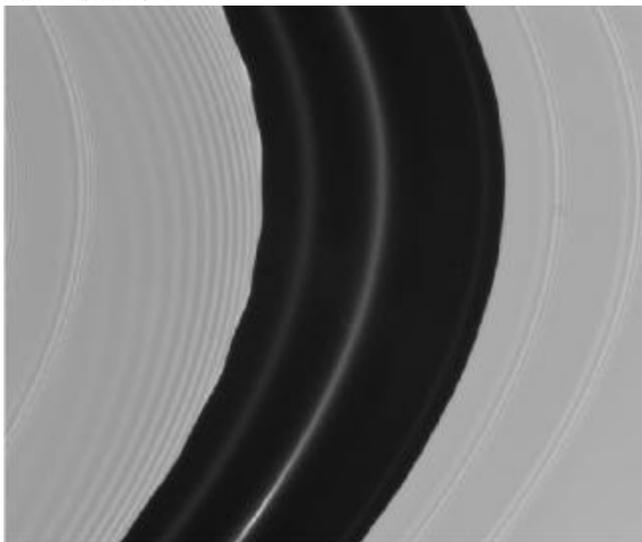
sudden deceleration of the spacecraft from the successful ignition of the main engine. Soon thereafter, however, Goldstone rotated out of range and Canberra took the watch. After completion of the burn, Cassini was programmed to make a 20-second "call home" using its high-gain antenna (HGA). Although this HGA signal would contain detailed data on the health of the spacecraft, mission controllers would consider it a bonus if any of that data were actually captured. Mostly, they just wanted to see the increase in signal strength to show the HGA was pointed toward Earth and be able to determine the spacecraft's speed from the Doppler data. If possible, they also wanted to try to lock onto the signal with DSN's closed-loop receiver, a necessary step for extracting engineering data.

Normally it takes around one minute to establish a lock on the HGA signal once a DSN station rotates into range. Having only 20 second's worth of signal to work with, the DSN not only established a lock within just a few seconds, but extracted a considerable amount of telemetry during the remaining seconds.

"The DSN people bent over backwards to get a lock on that telemetry signal. And they weren't just depending on the technology. They really know how to get flawless performance out of it. They were awesome," remarks Doody.

Find out more about the DSN from JPL's popular training document for mission controllers, Basics of Space Flight (www.jpl.nasa.gov/basics) and the DSN website at deepspace.jpl.nasa.gov/dsn. For details of the Cassini Saturn orbit insertion, see www.jpl.nasa.gov/basics/soi. Kids can check out The Space Place at spaceplace.nasa.gov/en/kids/dsn_fact1.shtml to learn about the amazing ability of the DSN antennas to detect the tiniest spacecraft signals.

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



Right after entering Saturn orbit, Cassini sent this image of the part of the Encke Gap in Saturn's rings. Image: NASA/JPL/Space Science Institute.

ASTROPHYSICS PHUN PHACTS

By Vicki Burnett

TRIVIA AND PHUN PHACTS

All the moons of the Solar System are named after Greek and Roman mythology, except the moons of Uranus, which are named after Shakespearean characters. *** Jupiter's moon Ganymede is the largest moon in the Solar System, and is larger than the planets Mercury and Pluto. *** Only 55% of all Americans know that the sun is a star. *** The International Space Station weighs about 500 tons and is the same size as a football field. *** Uranus is the only planet that rotates on its side. *** The most volcanically active body in the solar system besides the Earth is Jupiter's moon Io. Erupting volcanoes were discovered on Io by the Voyager spacecraft. *** A Jupiter day, the time required for the planet to rotate once, is only about 10 hours long. Jupiter has the shortest day (rotation period) of any planet in the Solar System. *** Olympus Mons on Mars is the largest volcano in our solar system. *** The largest canyon system in the Solar System is Valles Marineris on Mars. It is more than 3000 miles long and so would stretch from California to New York. In some places it reaches 3 miles in depth and 200 miles in width. *** The planet Uranus was discovered by the eminent English astronomer William Herschel in 1781. He briefly considered naming the planet George in honor of England's King George III. *** The surface of Venus is obscured by clouds at ultraviolet, visible, and infrared wavelengths, which is why the Pioneer and Magellan spacecraft used radar to penetrate the clouds and image the surface. *** Venus rotates very slowly. A Venus day, the time it takes Venus to rotate once, is approximately 243 Earth days long (longer than the Venus year of 224 days) and is retrograde. *** With the only exception of Maxwell Montes (Venus' highest mountains), all surface features on Venus are named after real or mythological females. *** For the first 100 million years or so after the formation of the solar system, a bright, naked-eye comet would have been visible in the skies of Earth roughly once per week. *** Size comparisons: About 1000 Earths would fit inside Jupiter, and about 1000 Jupiters would fit inside the Sun. *** Our Solar System, by virtue of its proper motion through our galaxy (the Milky Way) is moving at a speed of 43,000 miles per hour toward the globular cluster of stars known as M13 in the constellation Hercules. *** The elements Carbon, Hydrogen, Oxygen, and Nitrogen - all crucial to life - are found in roughly the same proportions in comets and human beings. *** Due to frequent collisions with subatomic particles, it takes a typical gamma ray photon about one million years to travel from the core of the Sun to its surface, even though gamma rays travel at the speed of light (the gamma ray region of light has shorter wavelengths than X-rays). By the time the photon that started out as a gamma ray photon escapes the solar furnace, it has lost so much energy through collisions that it emerges from the Sun's surface as a photon of ordinary, visible light.

ASTRONOMICAL IMAGING S.I.G.

(Special Meeting Notice)

By George Korody

Beginning in September the Astronomical Imaging S.I.G. will be meeting at a new location and starting time. The next meeting will take place at the Henry Ford Community College (HFCC) on Thursday, September 9 starting at 5:30 PM. We will have a time slot that extends to 8:00 PM as needed. Clay Kessler will lead the discussion, which will be an update on film imaging techniques.

Starting with this meeting, we will be meeting on the second Thursday of each month and will meet in Roseneau Conference Rooms A & B, which are the same rooms where the regular FAAC General Membership meetings are held, except that the FAAC meetings take place on the fourth Thursday of each month.

The Roseneau Conference Rooms are in the Administrative Services and Conference Center (ASCC) building. Parking can be in Lot J or in the Staff Parking lot next to the ASCC building if Security is present there. Security will be there to permit parking for us only. There really isn't much difference in walking distance from either lot, but once college begins in the fall Lot J could be quite full.

A layout of the college area can be found in the July newsletter, which is on-line at our WEB site at <http://www.boonhill.net/faac/> If anyone has questions, they can contact the writer.

All FAAC members are welcome and encouraged to attend these discussions.

NEW MEMBER WELCOME

FAAC welcomes the following new members:

Bob	Hannum
Stephen	Harvath
Doug	Hayes
Fred	Wilson

FAAC CALENDAR

Activity	Date	Time
- Beginners Night	Aug 21	6 pm
- General Meeting	Aug 26	5 pm
- Board Meeting	Sep 9	5 pm
- Beginners Night	Sept 11	6 pm
- General Meeting	Sep 23	5 pm
- Board Meeting	Oct 14	5 pm
- General Meeting	Oct 21	5 pm
- Board Meeting	Nov 11	5 pm
- General Meeting	Dec 2	5 pm

ASTRONOMICAL CALENDAR

All times are Eastern Standard Time or Eastern Daylight Saving Time, whichever applies

August

- 23 Mo First Quarter Moon
- 29 Su Full Moon
- 31 Tu Venus near Saturn

September

- 6 Mo Last Quarter Moon
- 7 Tu 1914 James Van Allen born
- 9 Th Mercury at Greatest Elongation West
Moon near Saturn
- 10 Fr Moon near Venus (See Star Chart)
- 12 Su Moon near Mercury
- 14 Tu New Moon
- 21 Tu First Quarter Moon
- 22 We Equinox - 12:30 PM
- 28 Tu Full Moon

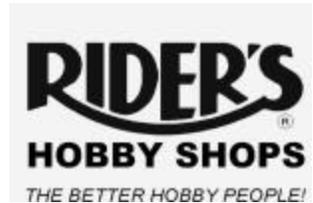
This information was obtained from the Henry J. Buhl, Jr. Planetarium in Pittsburgh, PA.



The Ford Amateur Astronomy Club

invites you to

The 12th Annual

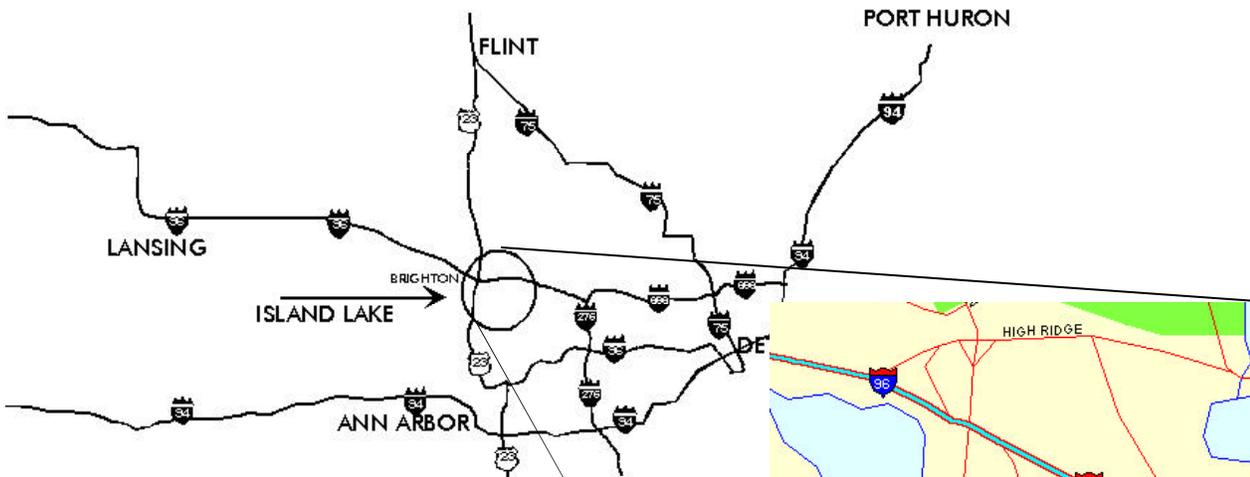


**Sept. 11, 2004, in the
Island Lake Park, Spring Mill Pond area.**

- ?? 5 pm - or earlier - come for a nice afternoon in the park, bring your own picnic goodies**
- ?? Solar observing during the day (optional)**
- ?? 7:30 pm – Beginner's Night events begin, including equipment introduction, children's sky tour challenge, and constellations tour**
- ?? See telescopes of all kinds –**
- ?? Bring your own telescope, ask questions, or volunteer to help**
- ?? Or, just come and look around, view the stars with our volunteers**
- ?? Dusk to ?? – night sky observing**

**Adults and children welcome - Admission is free.
Park entry fee required, \$4 per vehicle.**

For more information, check our website: www.boonhill.net/faac



Island Lake State Recreation Area is located near I-96 just east of US-23. Exit I-96 at Kensington Road, exit 151, and go south about 1/2 mile to the park entrance. The star party is held at the Spring Mill Pond area within the park. Turn right after the toll booth. Spring Mill Pond is about 2 1/2 miles from the entrance. Spring Mill Pond has plenty of free parking and clean modern restrooms.



Please Remember – Clear Autumn nights can get very cool. Bring warm clothes. And don't forget the State "Bird" - bring mosquito repellent.

It is polite to cover your flashlight with a red filter so as to avoid spoiling anyone's night vision.



Comet Ikeya-Zhang - By Clayton Kessler



The Island Lake Star Party is an ideal outing for Scout Troops and Class Trips. We strive to provide an atmosphere where presentations are educational and FUN. Don't forget – Spring Mill Pond is our regular observing site. Members are there most clear Friday and Saturday evenings. Call our Observing Hotline at (313) 390-5456 to confirm an observing weekend and join us! Check out our Web site at <http://www.boonhill.net/faac/>. E-mail faac1992@hotmail.com

CCD Image of Saturn by George Korody, CCD Image of Jupiter by Doug Bock, Northern Cross Observatory

The Second Annual
**Great Lakes
Star Gaze**
"A star party with dark skies!"



September 17-19, 2004

Held under the dark skies of
**River Valley RV Park,
Gladwin, MI**

Sponsored by the
Sunset Astronomical Society



GENERAL INFORMATION

Location and dark sky are the main attractions of this star party. Gladwin's central location provides excellent observing without traveling hours into Northern Michigan. 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. This is a star party for the amateur astronomer who loves to observe and mingle with other amateurs. Some practical and interesting talks are scheduled to enhance your weekend experience.

STAR PARTY HIGHLIGHTS

Friday, September 17th:

5:30 – 6:30

- Registration begins

6:30 – 7:00

- Star Party Kickoff...
- Opening Comments

7:00 – 8:00

Astronomy Talk

- "Visiting the Keck Telescope" - *Bill Atbe*

8:00 – ???

- Observing on the hill
- *Welcome tent open all night*
- *Free hot chocolate/ coffee*
- Bring your scopes!
- Gate closes at 10:00
- **ABSOLUTELY NO CAR LIGHTS ALLOWED!**

Saturday, September 18th:

10:00 – 12:00

- Swap meet in Club House
- Bring your old equipment and your wallet!
- Vendor – *Rider's Hobby Shop of Livonia* will have new astro-equipment for sale.

12:00 – 1:00

- Break

1:00 – 2:00

- Kids Activities

2:00 – 5:30

- H-alpha solar observing and talk - *TBA*
- Equipment Talk - *TBA*
- Astro-software Talk - *TBA*

5:30 – 7:00

- Dinner Break – *Prepaid Dinner package in the works...*

7:00 – 8:00

- Door Prize Drawing – *must be present to win.*
- Closing comments

8:00 – ???

- Observing on the hill
- *Welcome tent open all night*
- *Free hot chocolate/ coffee*
- Bring your scopes!
- Gate closes at 10:00
- **ABSOLUTELY NO CAR LIGHTS ALLOWED!**

Sunday, September 19th:

Departure by 12:00



Great Lakes Star Gaze

GETTING TO RIVER VALLEY RV PARK

From US-10
Travel 12 Mi. N. from Loomis Exit.

From US-27
Travel 6-1/2 Mi. E. from Lake George Exit
From M-61 travel 2-1/2 Mi. S. on Bailey Lake Ave. (midway between Gladwin and Harrison).

WHAT IS INCLUDED WITH YOUR REGISTRATION:

- Tent camping on the observing hill for you and/ or your family.
- Hot coffee/ chocolate in welcome tent
- 1 ticket for door prize raffle per registration
- Clean hot shower/ restroom facilities

TRAVEL TRAILER FEES:

- Full hook-up sites for travel trailers are available, but you will need to complete our registration form.
- Cost of full hook-up sites is an additional \$25-27 per night plus our star party registration fees.
- **River Valley RV Park**
Phone: (989) 386-7844
Website: <http://www.rivervalleyrv.com>

LATE REGISTRATION:

Registrations after 8/15/04 should include a \$5.00 late fee and are limited to available space. This includes registration at the gate



RIVER VALLEY R.V. PARK



REGISTRATION FORM: Complete, detach and mail this registration form along with a check or money order.

Name: _____ Phone: _____ e-mail: _____

Address: _____ City: _____ State: _____ Zip: _____

Check appropriate box below and make check payable to: **"Sunset Astronomical Society"**.
Mail to: **Joe Bruessow, 2200 Nine Mile Rd. Kawkawlin, MI 48631**

- | | |
|---|---|
| <input type="checkbox"/> One Night Tent – Individual \$15.00 | <input type="checkbox"/> One Night Tent – Family \$20.00 |
| <input type="checkbox"/> Two Nights Tent - Individual \$20.00 | <input type="checkbox"/> Two Nights Tent - Family \$30.00 |
| <input type="checkbox"/> One Night (travel trailer) - \$10.00 <i>plus additional campground fees in RV park (See other page)</i> | |
| <input type="checkbox"/> Two Nights (travel trailer) - \$15.00 <i>plus additional campground fees in RV park (See other page)</i> | |
| <input type="checkbox"/> Are you interested in purchasing a prepared dinner for Saturday? (we are still working out details) | |
| <input type="checkbox"/> T-shirt - \$15.00 each Quantity: _____ Sizes _____ (S, M, L, XL, and XXL available) | |

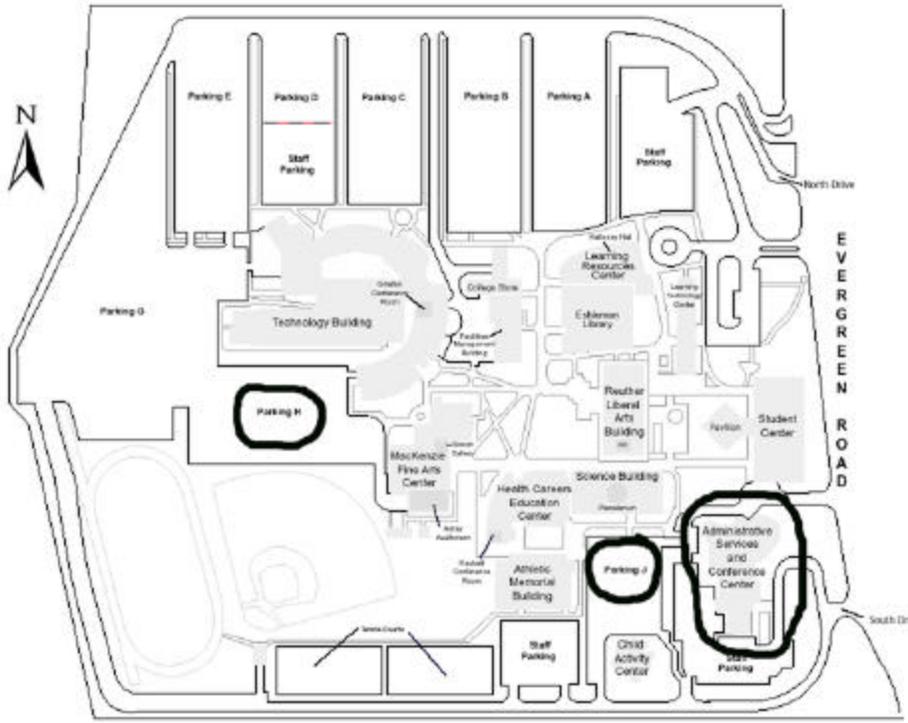
Registration must be post-marked no later than August 15, 2004. Registrations received after 8/15/04, including "at the gate", are limited to space available and will cost an additional \$5.00 per night.

NEW MEETING LOCATION

For FAAC General Meeting

July 22, 2004 @ 5:00 pm

Henry Ford Community College, Main Campus
5101 Evergreen Rd.
Dearborn, MI 48128-1495



NOTE:

- HFCC is located on Evergreen Road between Ford Road and Michigan Avenue.
- Suggested parking lots H and J have been circled.
- The meeting will be held in the Administrative Services and Conference Center which has also been circled.

Ford Amateur Astronomy Club

Beginner's Night at Island Lake

Saturday from 7:30pm to Midnight

August 21st, and Sept 11th

Do you have a new telescope that you would like to learn to use? Do you want to see samples of what the night sky has to offer (weather permitting)? You should consider coming out to Island Lake Recreation Area on Beginner's Night. These nights are dedicated to providing equipment and observing assistance to new astronomers.

(The event will take place on the date indicated regardless of sky conditions, cloudy or clear. If it is raining, the event will be cancelled.)

The exact location of the observing site is the "Spring Mill Pond" parking lot and picnic area, at the Island Lake State Recreation Area, on Kensington Road, south of I-96 between South Lyon and Brighton.

For more info or details on this event, send an E-mail message to riderslivonia@aol.com or check the club website at www.boonhill.net/faac

You may also contact John or Dan at Rider's Hobby Shop 734-425-9720

The Ford Amateur Astronomy Club observes at the Island Lake site on Friday and Saturday evenings year round, provided skies are clear. You are welcome to visit the observing site on any weekend, but you must be with a club member if you plan to observe after 10PM. Call 1-313-390-5456 to find out if anyone is going out on any particular night.

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



RIDER'S[®]

HOBBY SHOPS

Store Hours: M-F 10am-9pm SAT 10am- 6pm SUN Noon-5pm	Gen. Manager: John Kirchhoff Website: http://www.riders.com Email: riderslivonia@aol.com	30991 Five Mile Rd. Livonia, MI 48154 Tele: 734.425.9720 Fax: 734.425.2029
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See the NEW Orion 100 ED Refractor!

Both OTA @ \$999.00 and

complete scope @ \$1399.00

IN STOCK!!