

STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club



Seeing in the Dark with Spitzer

by Patrick Barry and Tony Phillips

Have you ever gotten up in the middle of the night, walked to the bathroom and, in the darkness, tripped over your dog? A tip from the world of high-tech espionage: next time use night-vision goggles.

Night vision goggles detect heat in the form of infrared radiation—a “color” normally invisible to the human eye. Wearing a pair you can see sleeping dogs, or anything that’s warm, in complete darkness.

This same trick works in the darkness of space. Much of the exciting action in the cosmos is too dark for ordinary telescopes to see. For example, stars are born in the heart of dark interstellar clouds. While the stars themselves are bright, their birth-clouds are dense, practically impenetrable. The workings of star birth are thus hidden.

That's why NASA launched the Spitzer Space Telescope into orbit in 2003. Like a giant set of infrared goggles, Spitzer allows scientists to peer into the darkness of space and see, for example, stars and planets being born. Dogs or dog stars: infrared radiation reveals both.

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The STAR STUFF newsletter is the print and online journal of the Ford Amateur Astronomy Club, recording and documenting the activities and accomplishments of the FAAC membership.

Your contributions are welcome any time.

Share your articles, stories, book reviews, equipment reviews, poetry, event photographs, astrophotographs, or anything of interest by publishing them in STAR STUFF

Send submissions to skyfog@comcast.net Do not think you must be a Pulitzer Prize contender to write something for your newsletter.

President's Corner

by Don Klaser, President, FAAC

Light pollution - the bane of astronomers everywhere! We buy filters to remove it, seek out darker (and more distant) sites to view, and perhaps contemplate (momentarily) taking out our neighbor's yard light with our trusty old BB gun. If you wear one of those 'North America at night' t-shirts, how many people have said to you "Wow - how neat!"

Recently I was driving on Ford Road near Canton Center Road. Who is the GENIUS who approved the installation of those acorn street lamps?! Is tar and feathering still allowed? Is there anything that we can do to reverse this trend?

Yes!! Install motion sensors on all exterior lighting fixtures and try to purchase fixtures that have a cut-off design to aim the light where it is needed. Inform your city officials

about the added costs of wasteful lighting practices and give them suggestions on remediation. For more information check out the website of the International Dark-Sky Association at www.darksky.org And lastly, remember the words of your parents - "Who left the light on - do you think we're made of money!!"

Saturday, June 4th, will be a special day. The Amateur Astronomers of Jackson will be having a picnic and star party at Lake Hudson to commemorate the establishment of the country's first dark-sky preserve within a state park. They will also be dedicating the kiosk that our club help fund which will inform the public about the significance of the site. Hopefully, we will be able to have a large contingent of FAAC members there!

Perhaps this action will be part of the "First step for man" in reducing light pollution and returning our heritage of the night sky.

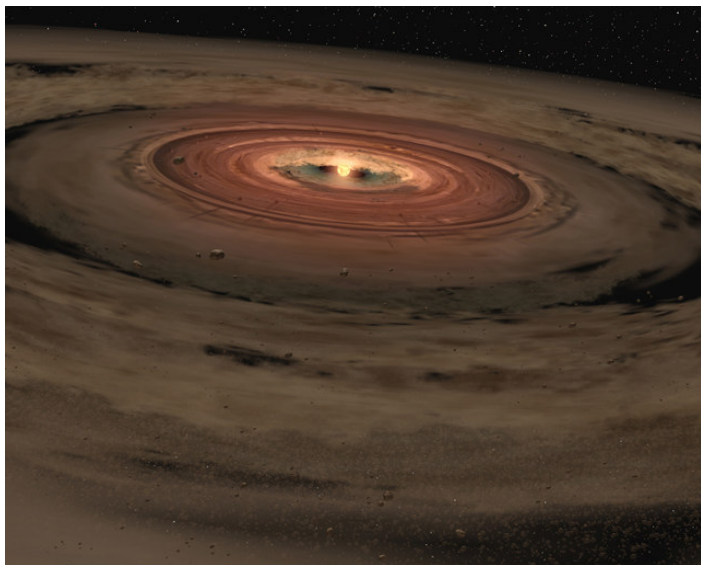
-- Don Klaser

Seeing in the Dark...

...continued from page 1

There is one problem, though, for astronomers. "Infrared telescopes on the ground can't see very well," explains Michelle Thaller, an astronomer at the California Institute of Technology. "Earth's atmosphere blocks most infrared light from above. It was important to put Spitzer into space where it can get a clear view of the cosmos."

The clear view provided by Spitzer recently allowed scientists to make a remarkable discovery: They found planets coalescing out of a disk of gas and dust that was circling—not a star—but a "failed star" not much bigger than a planet! Planets orbiting a giant planet?



Artist's rendering of brown dwarf OTS44 with its rotating planetary disk.

The celestial body at the center of this planetary system, called OTS 44, is only about 15 times the mass of Jupiter. Technically, it's considered a "brown dwarf," a kind of star that doesn't have enough mass to trigger nuclear fusion and shine. Scientists had seen planetary systems forming around brown dwarfs before, but never around one so small and planet-like.

Spitzer promises to continue making extraordinary discoveries like this one. Think of it as being like a Hubble Space Telescope for looking at invisible, infrared light. Like Hubble, Spitzer offers a view of the cosmos that's leaps and bounds beyond anything that came before. Spitzer was designed to operate for at least two and a half years, but probably will last for five years or more.

For more about Spitzer and to see the latest images, go to <http://www.spitzer.caltech.edu/spitzer>. Kids and grown-ups will enjoy browsing common sights in infrared and visible light at the interactive infrared photo album on The Space Place,

http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml.

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FORD AMATEUR ASTRONOMY CLUB
P.O. Box 7527
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PRESIDENT:	Don Klaser
VICE PRESIDENT:	Ed Halash
SECRETARY:	Dale Ochalek
TREASURER:	Gordon Hansen
NEWSLETTER EDITOR:	Greg Burnett

CLUB INFORMATION

The Ford Amateur Astronomy Club holds regular general meetings on the fourth Thursday of each month, except for the combined November/December meeting held on the first Thursday of December. Meetings are held in the Administrative Services and Conference Center building at Henry Ford Community College in Dearborn. Refer to our website for a map and directions.

The Ford Amateur Astronomy Club 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.

Observing schedules and additional information are available by calling the FAAC Observing Hotline at 313-390-5456, on the Ford Intranet at www.be.ford.com/astro/faac.html, and on the public internet at www.boonhil.net/faac

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

Membership fees are as follows:

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

MAGAZINE DISCOUNTS

Do not send money to the FAAC for **ASTRONOMY** or **SKY & TELESCOPE** magazine subscriptions. Obtain a discount form from the club secretary and send the form directly to the publisher with your subscription to receive a \$10 discount.

STAR STUFF NEWSLETTER SUBMISSIONS

Your submissions to **STAR STUFF** are more than welcome! Send all items to the editor at skyfog@comcast.net preferably in MS-Word format, but in-line email text is fine too. **STAR STUFF** will usually go to press the weekend prior to the week of each general meeting. Submissions received prior to that weekend will be included in that issue.



Early Arrivals for Beginner's Night II Saturday May 14th
 Left to Right John and Dan Kulakowski, Don Klaser, guest Scott Boatright
 Dan Wellbaum, Gordon Hansen, Stephen Harvath

Beginners' Night II

by John Kirchhoff

Thanks to a last minute change in the weather (for the better) Beginner's Night II was held Saturday night June 14th at our Spring Mill Pond observing site at Island Lake. The poor weather during the day held attendance down but by the end of the evening we still counted over a dozen cars and twenty or so club members and guests. Members present were treated to some very nice views of the moon, Saturn and Jupiter as well as our first views of an evening Venus very low in the NW shortly after sunset. Members also observed a very bright Iridium flare (-7) that really lit up the sky for several seconds not long after sunset. The Michigan nebula reappeared out of the west shortly before 11PM and we were under 100% cloud cover in a matter of minutes bringing Beginner's Night II to an early close.

Mark your calendars now for our next Beginner's Night, Saturday June 11th. We will see if we can make it three in a row!

Minutes of the FAAC General Meeting

by Don Klaser

April 28, 2005

The meeting started promptly at 5:30 PM. Some members shared their observing experiences. The planets Jupiter and Saturn are still high on the target list for many of us. Don't waste any time because Saturn is getting lower in sky each night and will disappear from sight in June!

Gary Strumolo provided the Tech Talk on the PST solar telescope from Coronado. For \$495, you can purchase one of these high quality scopes with built-in Hydrogen Alpha filters to view solar flares, plages, prominences, sunspots, and filaments. One interesting feature on these scopes is the Fabry-Perot Etalon "penta-prism" which is used as the focusing adjustment, no movement of the objective lens or eyepiece is needed to achieve focus. The basic scope comes with a one-angstrom bandwidth filter, which will show great detail on the sun. If your funds are

unlimited, you can spend \$10,000 more for a somewhat better view with a larger aperture Coronado instrument with narrower bandwidth!

Next up was Lynn Umbarger, who covered Einstein's special and general theories of relativity. Einstein realized that there is no single point of reference for measuring time or space. His theories are still being proved correct with experiments today. Albert became famous when his equations correctly described the "errors" seen in star locations near the sun during a solar eclipse. If you want a copy of Lynn's presentation you can email him at lumbarge@ford.com.

Gordon gave the secretary's report. We have \$4,799.33 in the bank, with \$383 designated in the equipment fund.

The Astronomy Day activities on April 16th were well attended. John Kirchhoff was on News 4 at the Channel 4 studios and did a plug for Island Lake nighttime observing, which was well attended, including a large group of students from Wayne County Community College. Mark your calendars for the FAAC picnic on August 13th, which coincides with beginner's night. More details later. Also noted was the Lake Hudson Star Party on May 14th, set up by the Amateur Astronomers of Jackson. Lake Hudson will be officially recognized as a dark sky site in Michigan.

Susan Stahl mentioned that the club library now has over 100 books. A process is being developed to list books and request books to signed out. Please continue to bring your books in. Ed Halash mentioned that May 6 and 7 were the dates for our first observing session at Richmond Airport and passed out maps. Don Klaser mentioned that he has set up an after school program including solar observing, Astro 101, and equipment presentation at Durfee Middle school in Detroit on May 10th.

The meeting adjourned at 7:30 PM, with memories of Einstein's Field Equation still racing in our heads.

-- Don Klaser

FOR SALE...

National Optical Model 160 Research Microscope

- Widefield 10x / 18mm eyepiece w/pointer
- 45° inclined monocular head rotates 360°
- DIN standard objective lenses: 4x (0.10 N.A.), 10x (0.25 N.A.), 40xR (0.65 N.A.), and 100xR oil immersion (1.25 N.A.)
- Mechanical stage with slide holder
- Coaxial coarse and fine focusing controls
- Adjustable 1.25 N.A. Abbe condenser
- 20-watt halogen lamp with variable rheostat provides critical illumination (not Köhler)

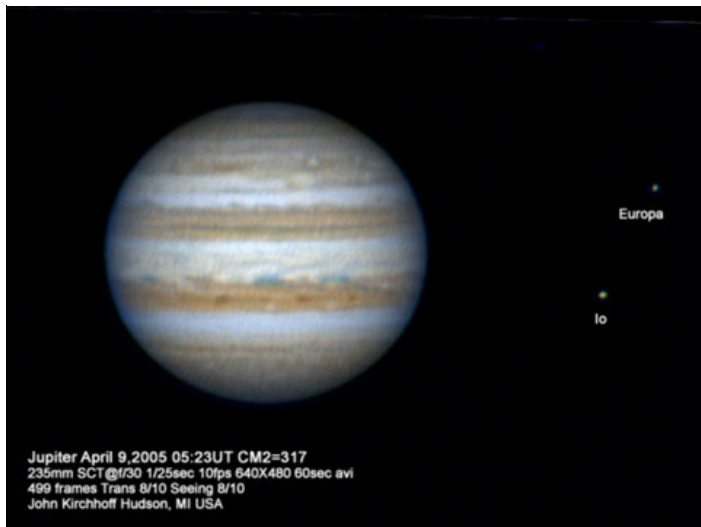
(See complete description at www.microscopeworld.com)

Excellent, almost new condition. Originally \$467.

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Contact Greg at skyfog@comcast.net or 313-845-3586

Astrophotography



This photo by John Kirchhoff was the April winner in the QCUIAG Web Challenge. The QuickCam and Unconventional Imaging Astronomy Group is an international web-based organization dedicated to astrophotography. Check them out at...

<http://www.qcuiag.co.uk/>

Congratulations John!

Astro - Poetry

Moonlit Dew-drops

Skies are graying.....night is near,
Scattered stars.....slowly appear,

Silence rolls in.....over the fields,
We're viewing clear skies.... all is still.

Tree leaves whisper.... quiet gardens listen,
Half-moon beaming.....dew-drops...glisten.

-- Anna Scott, FAAC

Lake Hudson Dedication

An email from the Amateur Astronomers of Jackson:

Because of the Kiosk SNAFU, we decided to postpone the Dedication/Picnic/Gaze to the evening of Saturday, June 4th. Tim Bauer of the Park Service wants to be able to have the Press there for publicity, and felt that the Kiosk would not be able to be installed in time.... even though it was delivered yesterday.

We are sorry that things got messed up, but Tim Bauer has an explanation for that. Ron Robinson (club President) felt that the weather for this weekend looks pretty iffy at this time and suggested we cancel everything until the June 4th date.

We now plan to have the dedication at 6:00 PM on the 4th, with the picnic to follow. If the evening looks okay, we will unpack the scopes for a Dark Sky Gaze!

Thanks for being patient with us,

Bob Frybarger

FOR SALE...

Meade 12" LX200 GPS SCT with UHTC

Only used six times!

Includes: Kendrick Dew Removal System, two 12 volt battery power sources, dew shield, Baader film sun filter

Over \$4000 of equipment! Best offer over \$3000

Contact Don Sommers at 248-553-7042

FOR SALE...

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 at 248-219-6222

Treasurer's Report - May 20, 2005

by Gordon Hansen

Bank Accounts	
Checking	\$ 428.61
Savings	\$ 2,704.83

TOTAL Bank Accounts	\$ 3,133.44
Cash Accounts	
Cash Account	\$ 25.50

TOTAL Cash Accounts	\$ 25.50
Asset Accounts	
FERA Ticket Sales	\$ -
GLAAC	\$ 795.00
Projector	\$ 413.97
Scholarship	\$ 256.60
Swap Meet	\$ -

TOTAL Asset Accounts	\$ 1,465.57

OVERALL TOTAL	\$ 4,624.51

Ford Amateur Astronomy Club

Beginner's Night at Island Lake

**Saturday from 7:30pm to Midnight
June11/July16/August13**

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? 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
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