

The Newsletter of the Ford Amateur Astronomy Club

Volume 20, Number 3

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Thank Goodness the Sun is Single

By Trudy E. Bell

It's a good thing the Sun is single. According to new research, Sun-like stars in close double-star systems "can be okay for a few billion years—but then they go bad," says Jeremy Drake of the Harvard-Smithsonian Astrophysical Observatory in Cambridge, Mass.

How bad? According to data from NASA's Spitzer Space Telescope, close binary stars can destroy their planets along with any life. Drake and four colleagues reported the results in the September 10, 2010, issue of The Astrophysical Journal Letters.

moon, "definitely a daytime object," Kastner remarked.

Such hot stars have fierce solar winds, so Kastner and his team are mystified why any dust in the neighborhood hasn't long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand.

Our Sun, about 864,000 miles across, rotates on its axis once in 24.5 days. "Three billion years ago, roughly when bacteria March 2011

evolved on Earth, the Sun rotated in only 5 days," explains Drake. Its rotation rate has been gradually slowing because the solar wind gets tangled up in the solar magnetic field, and acts as a brake.

But some sun-like stars occur in close pairs only a few million miles apart. That's only about five times the diameter of each star s o close the stars are gravitationally distorted. They are actually elongated toward each other. They also interact tidally, keeping just one face toward the other, as the Moon does toward Earth.

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President's Corner

Its March and spring is upon us. The vernal equinox occurs at 23:21 UT on March 20th. That's 6:21 PM EST or 7:21 EDT which will start on Sunday, March 13. Of course it will still occur at 11:21 PM in Greenwich because they don't change the clocks to "summer time" till March 27. Confusing isn't it? It gets worse.

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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 Administration 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 a private observing site near Gregory Michigan and lake Erie Metro Park. 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 Members:\$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 subscriptions request and payment. Do not send any money directly to the FAAC for this.

Star Stuff Newsletter Submissions

Your submissions to STAR STUFF are welcome! Send your story and/or images to the editor at jenzdanowski@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 the 15th can be included in that issue.

* FAAC Members are welcome to join our Ford Astronomy Club Yahoo!Group. Messages photos, files, online discussions, and more! URL: groups.yahoo.com/group/FordAstronomyClub.

This months background photos of the moon Page 1 courtesy of John Kirchhoff. See more of John's photos at:

http://www.flickr.com/photos/ 33926475@N06/with/4311533997/

Presidents Corner

(continued from Page I)

Equinox comes from Latin aequus (equal) and nox (night) - the day and night should have equal length – right?. Wrong! The sun rises at 7:37 AM and sets at 7:45 PM that day. According to TheSky the closest sunrise and sunset get to 12 hours apart is March 17 (7:42 AM & 7:41 PM.) Thanks to Wikipedia I discovered that day is an "equiluxe."

All of this is good news - bad news. The good news is you can start thinking about observing without the worry of frostbite. The bad news is the nights are getting shorter leaving less time for observing. (Unless you're into solar observing - in that case its more good news!) It also means its time for a Messier marathon. If you're new to this sport, this is the time of year when it's possible to see ALL of the Messier objects in one night. You need to start at sundown and continue to sunrise. As I write this the forecast for March 5 is snow (what else is new.) The next new moon weekends are April 2nd and 9th. I suggest we all gather at Lake Hudson on the 2nd and track down those "M" objects.

If you haven't made your reservation yet for the annual club banquet, what are you waiting for? This is always a fun event with good company, good food, prizes, and Astro Jeopardy. The dinner is on Saturday, April 16th at Karl's Cabin. Chuck will be taking reservations at the meeting on the 24th or you can mail a check (\$30/ person) to the club at:

FAAC

P.O. Box 7527 Dearborn, MI 48121

Please include your entree selection (NY Strip Steak, Chicken Marsala, or Herb Whitefish.)

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Planetary collisions such as shown in this artist's rendering could be quite common in binary star systems where the stars are very close.

Thank Goodness the Sun is Single (continued from Page I)

Such a close binary is "a built-in time bomb," Drake declares. The continuous loss of mass from the two stars via solar wind carries away some of the double-star system's angular momentum, causing the two stars to spiral inward toward each other, orbiting faster and faster as the distance shrinks. When each star's rotation period on its axis is the same as its orbital period around the other, the pair effectively rotates as a single body in just 3 or 4 days.

Then, watch out! Such fast spinning intensifies the magnetic dynamo inside each star. The stars "generate bigger, stronger 'star spots' 5 to 10 percent the size of the star—so big they can be detected from Earth," Drake says. "The stars also interact magnetically very violently, shooting out monster flares."

Worst of all, the decreasing distance between the two stars "changes the gravitational resonances of the planetary system," Drake continued, destabilizing the orbits of any planets circling the pair. Planets may so strongly perturbed they are sent into collision paths. As they repeatedly slam into each other, they shatter into red-hot asteroidsized bodies, killing any life. In as short as a century, the repeated collisions pulverize the planets into a ring of warm dust.

The infrared glow from this pulverized debris is what Spitzer has seen in some selfdestructing star systems. Drake and his colleagues now want to examine a much bigger sample of binaries to see just how bad double star systems really are.

They're already sure of one thing: "We're glad the Sun is single!"

Read more about these findings at the NASA Spitzer site at <u>www.spitzer.caltech.edu/news/</u> <u>1182-ssc2010-07-Pulverized-Planet-Dust-May-</u> <u>Lie-Around-Double-Stars</u>. For kids, the Spitzer Concentration game shows a big collection of memorable (if you're good at the game) images from the Spitzer Space Telescope. Visit <u>spaceplace.nasa.gov/en/kids/spitzer/</u> <u>concentration/</u>.

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

Treasurer's Report March 09, 2011

By Chuck Jones

Bank Accounts	
Checking	\$843.40
Savings	\$1690.44
TOTAL Bank Accounts	\$2533.84
Cash Account	
Cash	\$125.38
TOTAL Cash Account	\$125.38
Investment Accounts	
CD 1	\$1,052.66
CD 2	\$1,093.83
TOTAL Investment Accounts	\$2,146.49
Asset Accounts	
Equipment	\$1,412.97
Scholarship	\$556.8
TOTAL Asset Accounts	\$1,969.77
OVERALL TOTAL	\$6775.48
Memos	
GLAAC	\$1,904.58

Meeting Agenda - March 24

HFCC – Berry Auditorium -Admin. Services & Conference Center <u>http://www.boonhill.net/faac</u> 5:30 **Opening/Introduction/Member Observing Main presentation:** Planetarium Show Dennis Salliotte **Tech Talk:** None this month

Club Projects/Committees/Member Support

- Metro Beach Metropark Outreach Sat, March 26th
- Farmington Hills Nature Center Outreach Sat, March 26th
- FAAC Banquet Karl's Cabin in Plymouth \$30/person Sat, April 16th
- SIG April 14th Berry Auditorium
- Friday, May 13 Howell Girl Scouts
- Open Discussion

Club Business/Secretary/Treasurer/Equipment Reports

Club Wear

To our "New and Current Members" Our club has "FAAC" Official Club Wear with our Logo Embroidered.

Anyone with an interest or need in FAAC Club Wear, I will be placing an order in the next few months, for more information please call me - Diane at 248 980-7832. The FILES section in the Yahoo group has a form noting each ITEM with PRICES. The listing name - "FAAC Club Wear" - please do not hesitate to call me.

Diane Worth

Astro Imaging SIG

Gordon Hansen

The March meeting was held at Hong Kong Chinese Restaurant in Dearborn

All are invited to join us in the Astro Imaging SIG meetings, to share and discuss images, experiences, and techniques.

We always have a good time, with lively discussion, and sharing of valuable information.

Next meeting is April 14th. The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

FAAC Events 2011

Mar 24 - General Meeting

Mar 26 - Metro Park Outreach

March 26th - Farmington Hills Nature Center

Apr 9 - Beginner's Night - Island Lake

Apr 14 - Astrophotography SIG Meeting

Background Photo from Lunt Solar Scope Image taken at the Hector J Robinson Observatory, June 28, 2010

One FAAC members blog

http://hjrobservatory.blogspot.com/

A few updates on the observatory, quick articles and photos. I'll try to improve my writing on this blog. Also, I try to keep daily updates on this blog. - Greg Knekleian, HJRO volunteer.

Items For Sale

Meade Lightbridge Deluxe 12" – F/5, 1524mm focal length. Purchased new last year. Perfect condition mechanically, optically and cosmetically. Big, clear deep sky views. Built-in battery powered cooling fan, two-speed Crayford focuser (1.25 / 2-inch). Easy to transport, set up collimate and use - smooth as silk. Upgraded with Bob's knobs and heavier collimation springs. Includes shroud, cover, Telrad and secondary mirror heater. Over \$1000 invested, will sell for \$650.

Contact John Johnson at jjohnsonpub@yahoo.com

or (248) 515-0014.

MEADE Telescope and Tripod 6 years old - in excellent shape **LXD 75** - Series Schmidt -Cassegrain 8" f/10 SC-8AT (Super Coated, Autostar Guided) - Focal Length 2000 mm Telescope weight = 24 lbs - with MEADE EMC Super Multi-Coatings and with optional Ultra-High Transmission Coating Tripod weight = 45 lbs - Die cast Aluminum German-Type Equatorial Mount with Variable-Height Field Adjustments Autostar Controller guides to 30,223 objects

Includes a Sun Filter, Overnight Protective Cover, Transportation Containers. Contact phone no. 248-851-5053, e-mail <u>robertboswell@comcast.net</u>

Two Scopes For Sale

Celestron 6" Schmidt Cassegrain w XLT Like new condition. With diagonal and finder.

Tote bag. \$325 Retail \$699

Meade Lightbridge 10" With std accessories. Used one time, includes transport boxes. Going for \$475 Retail \$599 + Ship + Tax Need to raise cash for toys.

Tom Blaszak <u>key_string_guy@yahoo.com</u>

Presidents Corner (continued from Page 2)

See the flyer in the "Files" section on Yahoo for details. George & Pat Korody, our prize committee, are always willing to accept prize donations. Do you have some astro related goodies looking for a new home? See George or Pat.

Also, our first Beginner's Night is scheduled for April 9th at Island Lake. As I indicated last month we're adding a couple of programs to the evening. We've scheduled a session on collimating a Newtonian telescope beginning at 7:30 PM. If you're interested, meet at the pavilion. John Schroer will be conducting a "Tour of the Night Sky" as soon as it gets dark. Once again, if you have suggestions for instructional sessions and/or would like to volunteer to conduct one, please let me know.

Clear Skies!

Gordon Hansen ghhansen@comcast.net

Spotlight On Our Boardmembers: Vice President, Jon Blum

Our club vice president for 2011 is Jon Blum. Jon has been interested in astronomy since childhood, but he did not take the time to learn much about it until he retired from dermatology in 2001. His grown children bought him a Meade ETX-90 telescope as a retirement present, but he found it difficult to learn to use the telescope on his own. So he was delighted when he discovered and joined the Ford Amateur Astronomy Club in 2002. He has since joined six additional astronomy clubs and has found that there is no such thing as too many astronomy meetings. Since this is the club that helped him get started, he feels good about returning the favor by participating in our club mentoring program to help new members get started in the hobby.

Jon enjoys observing with other club members, especially at our club's darkest site at Richmond Airfield. His favorite event is the Great Lakes Star Gaze, where club members spend three days chatting all day and observing all night every September. He has given talks at our club about how he chose his current Celestron NexStar 8inch telescope, about all of his favorite astronomy gadgets, and about astronomy on Maui. His next talk will be a comparison of astronomy clubs.



FAAC General Meeting Minutes February 24, 2011

By Jim Frisbie, for Doug Bauer, Secretary

Opening:

The meeting was called to order in the Hackett Conference Room at 5:30 pm by Gordon H., President. Gordon H. has the name tags and will take requests. Several Board Members were in warmer places. John Blum is in Hawaii, Chuck Jones is in the Bahamas, and Doug Bauer is in Florida. All attendees introduced themselves. 2011 Club Dues were due by 31 January 2011 and are now \$30. Members contributed their observing experiences.

Program:

Main Presentation: Dave Holt from the Oakland Astronomy Club delivered a talk on The Tunguska Event.

Tech Talk: Gary Strumolo gave a talk on the Emerald Observatory iPad Application.

Business Meeting:

- Secretary's Report was presented by Jim F.
- Treasurer's Report was presented by Larry G.
- Swap Meet, March 12, at Holy Cross Lutheran Church in Livonia, Tables \$20.
- Metro Beach Outreach, Sat., March 26
- Farmington Hills Nature Center, Saturday, March
 26

- FAAC Banquet, April 16 at Karl's Kabin, price \$30/ person

- SIG Meeting will be held on Thursday, March 10.

A second SIG Group is forming for the Hector J.
 Robinson Observatory, if interested
 please contact George K.

- Howell Girl Scouts - Club Outreach, Friday, May 13

Memorial Service for Bob Justin, Sat., March 5th at
5 pm in room 300 Strong Hall, EMU in Ypsilanti

- Astronomy Day, May 7th, at the Detroit Science Center, Beginners Night at Island Lake Follows.

- George Korody solicited prize donations for the Banquet.

- Memorial Service for Sean FitzGerald with be held on Sunday, April 3rd at the Gaelic League in Detroit.

- Astronomy At The Beach will be held on September 9 and 10, 2011.

- Mike R. is working on a Scale for use at Club Outreach Events. The Scale will be calibrated to display a persons weight on each planet.

- "Globe at Night" is active again to collect data on darkness of skies around the world.

The meeting was adjourned by Gordon H. at 7:05 pm.

"One Starry Night, An Earth Hour Event"

On Saturday, March 26, from 7 to 9 PM, the Ford Amateur Astronomy Club, together with the Warren Astronomical Society, will present astronomy information and viewing for the public at an event in Farmington Hills. "One Starry Night, An Earth Hour Event" will focus on light pollution and astronomy. The event is being put on by the Green Efforts Committee of Farmington Hills, together with that city's Parks and Recreation Department. It takes place at the Farmington Hills Nature Center, at Heritage Park, at 24915 Farmington Road in Farmington Hills. If the weather is clear enough for observing, we will need several club members to bring their telescopes to show a few celestial objects to the public. If skies are cloudy, we will do an indoor presentation. For more information, contact Jon Blum vpfaac@hotmail.com .

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(continued from February 2011 Star Stuff)

This group of visitors were interested in Astronomy and very polite. Visitors saw M42 and M45 through both telescopes and Jupiter (in the Obsession). Jupiter didn't offer many details due to it's low position above the horizon. After viewing for about 30 minutes we returned inside to continue the tour.

The telescope operator showed us the first large telescope mirror built in the USA. The 69 inch mirror weighs about 3600 lbs. I couldn't help but daydream of fitting this huge mirror into a new computerized homebuilt folded dob. (Maybe I should make them an offer for it?) Near the mirror a 1930's transformer and motor waited for power to move the big dome.

The look of the motors reminded me of some early motors I've seen at the Henry Ford Museum.

It's alive!

The telescope operator pulled the lever on an old power panel, and sound of the transformer echoed below the observatory. This 1920's building, requires a climb up stairs to enter the big dome (There is no handicap access.)

The dome was built for a larger telescope. The Perkins 69 inch telescope was moved to Lowell Observatory in Arizona. The 69" glass mirror was replaced in Lowell by a 72" zerodur mirror, many years ago. The current 32 inch telescope looks small under the huge Perkins dome.

The telescope operator explained all the basics. He then climbed up the steps to the platform, and tilted the telescope down. Visitors could walk past and look up at the primary mirror. A couple of young girls were so impressed they circled back into line and went up and past the scope to get a second look.

We then saw the dome rotate and felt a huge rush of January air as the shutter opened. I hope to return for more tours at Perkins and also may show more photos at a future FAAC club "tech talk".



Some telescopes in the library



TALK ABOUT MIRROR PROJECT Columbus Astronomical Society has a SIG meeting at Perkins that builds telescopes. Someone in the Amateur Telescope Making group is making a 32 inch mirror (above)

(Below) The "Big Ear" is gone, but not forgotten.



Hector J Robinson Observatory Update

by Greg Knekleian

O-SIG group

This article was written before the O Sig meeting.

Still Limited observing opportunities

Early March, I only opened the observatory a couple times. Art Parent and Wendi Palumbo showed up for one of the observing sessions. March 6th, I opened up the HJRO late in the evening, I wasn't able to give advance notice to club members or blog visitors. Nobody showed up and the visual conditions were clear, but seeing seemed hindered by fog or ice crystals. George Korody mentioned some of the visual distortions I saw may have been a sign of a need to check the optical alignment of the C14. (Something to check out the next clear night.) I looked at Saturn and had some nice visual glimpses of it and a half a dozen galaxies.

There's not a lot to include in an update of the current LPPS Observatory website. We'll be discussing the LPPS website at the first O Sig meeting. There's a calendar but no official announcements for activities on it yet.

This month I'm including a screen capture of the moon from the Stellacam. This was through the C14 taken last year. Instead of improving details through processing, I reduced the details, to give it a comic book illustration appearance.

Tested LCD Monitor

We have a small HDTV monitor in the observatory. About a month ago there seemed to be a display issue with it, perhaps related to the cold affecting the display. I took it home and tried it out in the warm environment. I found it was fine and returned it a couple of days later. I'm not sure what that dark smudge was on the monitor during a cold February night. Perhaps it was dust on the Stellacam 3 sensor.



A posterized moon, above.

Two club presidents, below.



Something I missed from last month

I briefly attended the HFCC open house event and took a few photos. Above you can see Gordon Hansen chatting with Jennifer Zdanowski.

Additional Perkins Tour Photos

More Perkins observatory online photos can be found in the following links listed below.

Additional high resolution online photo page related to the Perkins Observatory article: http://www.fordastroclub.com/pdf/PerkinsObservatoryPage3.pdf (635 megabytes) Most of the photos from my Perkins Tour: http://www.fordastroclub.com/pdf/TripToPerkinsPhotosSample.pdf (11 pages, 22 megabytes.) Ford Amateur Astronomy Club Star Stuff Newsletter P.O. Box 7527 Dearborn MI 48121-7527

