



# STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 20, Number 9

September 2011

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## Dark Clues to the Universe

By Dr. Marc Rayman

Urban astronomers are always wishing for darker skies. But that complaint is due to light from Earth. What about the light coming from the night sky itself? When you think about it, why is the sky dark at all?

Of course, space appears dark at night because that is when our side of Earth faces away from the Sun. But what about all those other suns? Our own Milky Way galaxy contains over 200 billion stars, and the entire universe probably contains over 100 billion galaxies. You might suppose that that many stars would light up the night like daytime!

Until the 20th century, astronomers didn't think it was even possible to count all the stars in the universe. They thought the universe was infinite and unchanging.

Besides being very hard to imagine, the trouble with an infinite universe is that no matter where you look in the night sky, you should see a star. Stars should overlap each other in the sky like tree trunks in the

middle of a very thick forest. But, if this were the case, the sky would be blazing with light. This problem greatly troubled astronomers and became known as "Olbers' Paradox" after the 19th century astronomer Heinrich Olbers who wrote about it, although he was not the first to raise this astronomical mystery.

*(continued on Page 3)*

## President's Corner

The 15th Annual Astronomy at the Beach is now history. Once again the Great Lakes Association of Astronomy Clubs (GLAAC) team did a fantastic job orchestrating an event that had something for all – from the young to old, from the curious to the experienced astronomer. GLAAC's membership includes volunteers from nine local astronomy clubs spearheaded by our own Bob MacFarland. We should all thank them for their hard work.

A host of people from our club manned the club table and greeted people as they arrived:

George Korody & Pat  
Chuck Jones & Barb  
Frank Ancona & Doris

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# STAR STUFF

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STAR STUFF is published eleven times each year by:

**FORD AMATEUR ASTRONOMY CLUB**  
P.O. Box 7527  
Dearborn MI 48121-7527

PRESIDENT: Gordon Hansen  
VICE PRESIDENT: Jon Blum  
SECRETARY: Doug Bauer  
TREASURER: Chuck Jones  
WEBMASTER: Greg Ozimek  
NEWSLETTER EDITOR: Jennifer Zdanowski

## 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](http://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](mailto: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](mailto: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](http://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 1)

DeeAnn Bauer

Milton French

Tom Jatkowski

Rick Arzadon

Ellen Duncan

Jon Blum presented Telescopes for Beginners and yours truly did Astronomy 101.

Thank you all for your great work. (If I missed anyone I apologize for the oversight.)

For the past five or so AATB events, the GLAAC committee scheduled a club members ONLY presentation by the key note speaker. This year was no exception and Dave Eicher, Editor-in-Chief of Astronomy Magazine met with the two dozen or so members from the participating clubs. The purpose of this Saturday 1 PM session is to give club members who've set up scopes a chance to hear the speaker. Those present had a real opportunity to ask detailed questions and carry on a dialog with Dave that's not possible during the public presentations.

The question I have is why so few members from any of the clubs take advantage of the this session? GLAAC has had the editor-in-chief of both Astronomy Magazine and Sky & Telescope, a NASA Astronaut, Andrew Feustel (a Michigan native who flew on the Hubble Service Mission,) and other notables in the field of astronomy. What other opportunities do most of us have to interact with people of this caliber? Is this not advertised sufficiently? If you haven't taken advantage of this session, please make a note to yourself to attend next year's session.

(continued on Page 5)



*This Hubble Space Telescope image of Galaxy NGC 4414 was used to help calculate the expansion rate of the universe. The galaxy is about 60 million light-years away. Credit: NASA and The Hubble Heritage Team (STScI/AURA)*

## Solar System Surprise

*(continued from Page 1)*

To try to explain the paradox, some 19th century scientists thought that dust clouds between the stars must be absorbing a lot of the starlight so it wouldn't shine through to us. But later scientists realized that the dust itself would absorb so much energy from the starlight that eventually it would glow as hot and bright as the stars themselves.

Astronomers now realize that the universe is not infinite. A finite universe—that is, a universe of limited size—even one with trillions of stars, just wouldn't have enough stars to light up all of space.

Although the idea of a finite universe explains why Earth's sky is dark at night, other factors work to make it even darker.

The universe is expanding. As a result, the light that leaves a distant galaxy today will have much farther to travel to our eyes than the light that left it a million years ago or even one year ago. That means the amount of light energy reaching us from distant stars dwindles all the time. And the farther away the star, the less bright it will look to us.

Also, because space is expanding, the wavelengths of the light passing through it are expanding. Thus, the farther the light has traveled, the more red-shifted (and lower in energy) it becomes, perhaps red-shifting right out of the visible range. So, even darker skies prevail.

The universe, both finite in size and finite in age, is full of wonderful sights. See some bright, beautiful images of faraway galaxies against the blackness of space at the Space Place image galleries. Visit <http://spaceplace.nasa.gov/search/?q=gallery>.

*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 September 11, 2011 By Chuck Jones

### Ford Amateur Astronomy Club Balance Sheet As of September 11, 2011

	Sep 11, 11
<b>ASSETS</b>	
Current Assets	
Checking/Savings	
CD 200599272	1,053.66
CD 89265268	1,097.86
Checking	1,482.59
FAAC Savings	458.67
Petty Cash Account	-8.16
Total Checking/Savings	4,084.62
Total Current Assets	4,084.62
Other Assets	
Equipment	1,569.97
GLAAC	1,513.27
Scholarship	245.80
Total Other Assets	3,329.04
<b>TOTAL ASSETS</b>	<b>7,413.66</b>
<b>LIABILITIES &amp; EQUITY</b>	
Equity	
Opening Balance Equity	8,439.30
Retained Earnings	-276.33
Net Income	-749.31
Total Equity	7,413.66
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>7,413.66</b>

### 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

## Meeting Agenda - September 22

HFCC – Berry Auditorium -Admin. Services & Conference Center <http://www.boonhill.net/faac>  
5:30

### Opening/Introduction/Member Observing

#### Main presentation:

Dark Skies

Frank Ancona

### Club Projects/Committees/Member Support

- October 1<sup>st</sup> - Beginner's Night
- Open Discussion

### Club Business/Secretary/Treasurer/Equipment Reports

## Items For Sale

**Celestron** 6x30 finder scope-\$25

**Starter scope** (similar to the Celestron power seeker) D=60mm F=700mm with tripod, and 3 lenses-\$50

For more information on these two items, please contact Lynn Spielman at: [lynnscats@wowway.com](mailto:lynnscats@wowway.com)

**Orion** 100 mm Achromat refractor, F6, with older CG4 equatorial mount. Diagonal and finder included. Asking \$250

Miscellaneous eyepieces and filters for beginners also available. Ask for \$\$

Call Tom Blaszk at 313.585.3351.

[key\\_string\\_guy@yahoo.com](mailto:key_string_guy@yahoo.com)

**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](mailto:jjohnsonpub@yahoo.com)  
or (248) 515-0014.

## Astro Imaging SIG

Gordon Hansen

*The August meeting was held at HFCC in the Berry Amphitheater 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 October 13th. The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

## FAAC Events 2011

**Sept. 22nd – 25th – Great Lakes Star Gaze**

**October 1st - Beginner's Night-Island Lake**

*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

*(continued from page 4)*

**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 [robertboswell@comcast.net](mailto:robertboswell@comcast.net)

## Presidents Corner

*(continued from Page 2)*

September started with AATB and will close with the Great Lakes Stargaze (September 22nd-25th) near Gladwin, Michigan, This is the largest star party in Michigan and promises to be a fun event once again. A dark sky site and a hundred or so Michigan astronomers. If you're not already planning on attending check it out at:

<http://www.greatlakesstargaze.com/forms/glsgreg2011.pdf>

The opening day of the event coincides with this month's club meeting. I should apologize up front, because the other officer's and I will be AWOL. We'll all be at the Star Gaze!

Gordon Hansen



# FAAC General Meeting Minutes August 25th, 2011

By Doug Bauer, Secretary

## Opening:

The meeting was called to order in the Berry Auditorium at 5:30 pm by Gordon Hansen., FAAC President. All attendees introduced themselves. There were 41 members and one guest present. Members contributed their observing experiences. Tim Campbell reported that The Lincoln Park Schools have found \$6,000 for improvements at the HJR Observatory and will be running fiber optics internet to the observatory soon.

John Schroer gave his first What's Up in the Night Sky talk. He included:

- Sept 22-24 – Waning crescent Moon
- Saturn is setting very early in the evening and will soon not be visible in the night sky
- Jupiter is rising earlier every night
- Neptune and Uranus are visible
- Mars will be in the Beehive cluster on Sept 30<sup>th</sup> around 5:30 AM
- Andromeda galaxy is visible in the east
- The Double Cluster in Persius is visible
- Comet 2009 /P1 Garradd is visible
- A young Type 1a Supernova has been brightening in M101

## Main Program:

Dave Bailey, from the Warren Astronomical Society, gave a presentation on H-R (Hertzsprung-Russell) Diagrams. He described various characteristics of stars in various areas of the H-R diagram, including the main sequence, convection zones, and metal content percentages (where anything heavier than Hydrogen and Helium is considered a metal).

Dave handed out an in-depth paper on the H-R Diagram describing many other facets of H-R diagrams and stars that he did not have time to cover.

## Tech Talk:

Jim Frisbie, from the Ford Amateur Astronomy Club, gave a presentation on selling items on Astromart.

His philosophy for selling items is:

As Advertised  
Good Communications  
Quick shipment

His process is:

Clean item first and confirm condition  
Research what similar items are selling for  
Take quality photos  
Prepare ad text – look at other ad's for ideas  
Add 3 % for PayPal users  
He closes ad with "Thanks Jim"  
Respond to everyone, even if the item was sold to another person  
Stack responses until you have the dollars in hand  
Negotiate  
Accepts only PayPal and US Postal Service Money Orders  
Congratulate the winning bidder and Thank others for interest  
Ship within 24 hours (charge customers for shipping)  
Pack items carefully with at least 2" of clearance  
Insure everything if it is over \$100  
Uses only FedEx and US Postal Service  
Save Records of each step of the sale  
Follow up promptly if there are any problems

## Business Meeting:

Secretary's Report as published in the August StarStuff was presented by Doug Bauer and approved.

Treasurer's Report published in the August StarStuff was presented by Chuck J. via Balance and Profit & Loss.

Astronomical League Dues are being sent in. If you want to join it is \$7.50, contact Chuck Jones.

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## FAAC General Meeting Minutes August 25th, 2011

By Doug Bauer, Secretary

### Business Meeting (cont'd)

At the September FAAC Meeting:

Sandra Macika volunteered to bring pop and take minutes

Frank Ancona will run the meeting

### Projects and Events

Sept 1 - Howell at the Moon at Howell, Thomson Lake Beach – Larry Halstead

Sept 2 – Pontese Society on Nine Mile Road in Farmington Hills – Larry Halstead

Sept 9/10 - GLAAC Astronomy At The Beach – Kent Lake Road exit is closed use Kensington Road Exit

Sept 10 – GLAA Astronomy at the Beach Special Speaker presentation for Club members at the Nature Center at 1:00 PM

Sept 13 – Sandra Macika will give an Astronomy 101 talk at the Livonia Library

Sept 22-25 – Great Lakes Star Gaze in Gladwin

Oct 18-23rd – Cadillac Star Party at Bill Beers' October – Bob MacFarland is arranging for a FAAC member tour of the EMU Planetarium

The Club Scope is available for loan out to members. It is booked through August. Let Gordon Hansen know if you would like to reserve it.

The meeting was adjourned at 7:30pm.

and Dennis Salliotte, who brought telescopes for the students to do solar observing. Greg Knekleian came in and shot some photos. Thankfully, the weather cooperated for the most part of all three days and there was plenty of activity on the sun which made for some interesting observing. Lots of students showed interest and enjoyed the event. We had many new students show up at our club meeting Thursday and the HJRO later that evening. You can tell when someone is going to be hooked!

Several members from the HFCC club are going to attend Great Lakes Star Gaze this upcoming weekend and I am hoping that we also have great weather. It is so exciting to have students showing so much interest and investing time and showing a passion for astronomy!

A special thank you to all those who helped with the HFCC Welcome Back Days and who helped out at HJRO for our visit:

Gordon Hansen~WBD  
Doug Bauer~WBD  
Bob Fitzgerald~WBD  
Dennis Salliotte~WBD  
Greg Knekleian~WBD & HJRO  
George Korody~HJRO  
Tim Dey~HJRO  
Brian Kutcher~HJRO  
Art Parent~HJRO

I think both of these events really helped peak curiosity and interest and will hopefully develop some life long astronomers!

## HFCC Welcome Back Days

By Jennifer Zdanowski

HFCC Welcome Back Days were held September 13th, 14th, and 15th at the Student Activities building on the HFCC campus. There was a great amount of activity inside and outside of the building all three days, but the real attraction was outside with volunteer FAAC members, Gordon Hansen, Doug Bauer, Bob Fitzgerald,



HJRO~George Korody, Jerome Washington, Art Parent, Jameel Baijey, Jennifer Zdanowski. Photo by Greg Knekleian

## Hector J Robinson Update

by Greg Knekleian

Rain and mud slowed down the construction cycle this month, with the bleacher tear down finally completed, but new bleachers and other trench construction continues.

Perhaps with better weather and more progress, we would have opened HJRO more last month.

Hopefully we'll be able to announce the observatory is open more days during the coming month. During bad weather, I've been attending SIG imaging meetings and studying processing techniques. At Astronomy at the Beach, I spent almost an entire evening chatting with Larry Hoffman. He showed me some photoshop editing features that bring out more photo details in astronomy photographs.

Thursday night September 15, followed a three day HFCC Astronomy club drive at HFCC's open house. The HFCC astronomy club and some students from U of M Dearborn were invited to visit the observatory. We had about fifteen people show up, including six FAAC members. (I didn't invite everyone from FAAC, because I wasn't sure how many college visitors would show up.) FAAC members present included George Korody, Art Parent, Tim Dey, Brian Kutcher, Jennifer Zdanowski and myself. HFCC members can become FAAC members, and hopefully most of them will be joining FAAC. (They seemed enthusiastic and ready to join.)

George did most of the controlling of the C14 during the Thursday night visit. There was additional viewing through the three additional telescopes that we setup outside. We viewed maybe a half a dozen objects, including M13, M15, Jupiter, the moon, the Andromeda Galaxy, Ring Nebula, and more.

Brian Kutcher setup his C-8 outside and also an Orion F4.9 8 inch Newtonian he purchased at the FAAC swap meet. I had my Vixen binocular telescope setup as well.

I was impressed with the quality views his "used" Orion Newtonian telescope gave.

HFCC members seemed to be pretty excited. One of them mentioned he attended Lincoln Park High School four years ago. He stated he always wanted to look through the telescope in the observatory, but when he was attending LP schools, the observatory had not yet been restored.

There will be a HJRO event Monday the 19th of September that will include cub scouts, some high school students and the FAAC cable show hosts and team. We will be observing the sun and shooting a cable show, or at least a part of the cable show at the observatory.

Fiber optic lines have been added and are in the ground, we just need the line fed to the observatory. (These cables are custom made to match the length of the run, by next month they should be in.)

I had a great time at Astronomy at the Beach (AATB). I spent most of my time manning scopes and showing the iPad to those looking through Art Parent's telescope. I wish I would have taken more AATB photos.



HFCC and FAAC members watch a shadow transit of Jupiter.  
Jennifer Zdanowski, Jordan Bar, George Korody, Brian Kutcher,  
Pedro Franco, Jerome Washinton, Trina Yih.  
(5 second exposure 3200 iso, Canon T1i.)



## Additional photos



Dennis Salliotte and his Televue refractor with solar filter at HFCC open house. There were many sunspots visible as you can see in this quick afocal handheld shot I took through his setup.

End of the day at Astronomy At The Beach. The clouds roll in.



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