



# STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 23, Number 7

July 2013

## In This Issue

### Page One

**Inventing  
Astrophotography:  
Capturing Light Over  
Time**

**President's Corner**

### Inside Stuff

**4 Treasurers Report**

**4 Equipment List**

**4 Meeting Agenda**

**5 Astro-Imaging SIG**

**6 FAAC Meeting  
Minutes - June 27,  
2013**

**7 HJRO Update**

**9 FAAC Fifth Annual  
Picnic Flyer**

## **Inventing Astrophotography: Capturing Light Over Time**

By Dr. Ethan Siegel

We know that it's a vast Universe out there, with our Milky Way representing just one drop in a cosmic ocean filled with hundreds of billions of galaxies. Yet if you've ever looked through a telescope with your own eyes, unless that telescope was many feet in diameter, you've probably never seen a galaxy's spiral structure for yourself. In fact, the very closest large galaxy to us-Andromeda, M31-wasn't discovered to be a spiral until 1888, despite being clearly visible to the naked eye! This crucial discovery wasn't made at one of the world's great observatories, with a world-class telescope, or even by a professional astronomer; it was made by a humble amateur to whom we all owe a great scientific debt.

Beginning in 1845, with the unveiling of Lord Rosse's 6-foot (1.8 m) aperture telescope, several of the nebulae catalogued by Messier, Herschel and others were discovered to

contain an internal spiral structure. The extreme light-gathering power afforded by this new telescope allowed us, for the first time, to see these hitherto undiscovered cosmic constructions.

*(continued on Page 3)*

## **President's Corner**

By Gordon Hansen

The clouds actually parted for our Beginner's Night this month resulting in a good turnout. It was great to get out and observe some skies and kibitz with fellow club members. Jeff Conn from Wayne State University also attended with some students and parents from the Astronomy Camp they're conducting. Its always fun to have some young astronomers to share the night sky with.

We will be participating for the first time this year at the Maker's Fair at the Henry Ford the weekend of July 27th and 28th.

*(continued on Page 2)*

# STAR STUFF

July 2013 - Vol. 23 No 7

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.fordastronomyclub.com](http://www.fordastronomyclub.com)).

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: 313-757-2582. or send email inquiries to [info@fordastronomyclub.com](mailto:info@fordastronomyclub.com).

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).

## Presidents Corner

(continued from Page 1)

This is an opportunity to advertise ourselves to a very large number of people and hopefully spawn interest in our hobby. We will be manning a club table and setting up some solar scopes from 9 am to 6 pm on both days on the lawn near the museum clock tower. These will be two full days so we could use more volunteers to help man the booth and to set up scopes for solar viewing.

I want to thank everyone who helped out with both a donation for and help moving John Schroer. John has been dealing with some serious health issues for most of this year that has prevented him from working. He is now in the Cincinnati area where he has family and in a rehab facility. I just talked with John and he sends along his thanks for your support. His phone number there is 513.645.0343 - give him a call he'll be glad to hear from you.

Don't forget our club picnic is on Saturday, August 10th at Island Lake. Once again we're tying the picnic in with our Beginner's Night at Island Lake. This night is also only two days before the peak of the Perseid meteor shower. Hopefully we'll get to see some of nature's fireworks.

*This month's 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/>



*Great Nebula in Andromeda, the first-ever photograph of another galaxy. Image credit: Isaac Roberts, taken December 29, 1888, published in A Selection of Photographs of Stars, Star-clusters and Nebulae, Volume II, The Universal Press, London, 1899.*

## Inventing Astrophotography: Capturing Light Over Time

*(continued from Page 1)*

But there was another possible path to such a discovery: rather than collecting vast amounts of light through a giant aperture, you could collect it over time, through the newly developed technology of photography. During the latter half of the 19th Century, the application of photography to astronomy allowed us to better understand the Sun's corona, the spectra of stars, and to discover stellar and nebulous features too faint to be seen with the human eye.

Working initially with a 7-inch refractor that was later upgraded to a 20-inch reflector, amateur astronomer Isaac Roberts pioneered a number of astrophotography techniques in the early 1880s, including "piggybacking," where his camera/lens system was attached to a larger, equatorially-mounted guide scope, allowing for longer exposure times than ever before. By mounting photographic plates directly at the reflector's prime focus, he was able to completely avoid the light-loss inherent with secondary mirrors. His first photographs were displayed in 1886, showing vast extensions to the known reaches of nebulosity in the Pleiades star cluster and the Orion Nebula.

But his greatest achievement was this 1888 photograph of the Great Nebula in Andromeda, which we now know to be the first-ever photograph of another galaxy, and the first spiral ever discovered that was oriented closer to edge-on (as opposed to face-on) with respect to us. Over a century later, Andromeda looks practically identical, a testament to the tremendous scales involved when considering galaxies. If you can photograph it, you'll see for yourself!

Astrophotography has come a long way, as apparent in the Space Place collection of NASA stars and galaxies posters at <http://spaceplace.nasa.gov/posters/#stars>.

*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 July 20, 2013

By Chuck Jones

### Ford Amateur Astronomy Club Balance Sheet As of July 20, 2013

	<u>Jul 20, 13</u>
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
CD 200599272	1,057.80
CD 205196033	1,002.32
CD 89265268	1,103.67
Checking	947.23
<b>FAAC Savings</b>	
Equipment	1,429.08
FAAC Club Savings	428.88
Scholarship	409.56
<b>Total FAAC Savings</b>	2,267.52
<b>Petty Cash Account</b>	194.27
<b>Total Checking/Savings</b>	6,572.81
<b>Other Current Assets</b>	
<b>GLAAC</b>	5,099.64
<b>Total Other Current Assets</b>	5,099.64
<b>Total Current Assets</b>	11,672.45
<b>TOTAL ASSETS</b>	<b>11,672.45</b>
<b>LIABILITIES &amp; EQUITY</b>	0.00

### Club Wear

You can order online from LL Bean, using the instructions contained in a file that you can view on our club Yahoo Group website Club Wear file folder at

<http://tech.groups.yahoo.com/group/FordAstronomyClub/files/Club%20Ware/>

## Meeting Agenda - July 25th

HFCC – Berry Auditorium -Admin. Services & Conference Center [www.fordastronomyclub.com](http://www.fordastronomyclub.com)  
5:30

### Opening/Introduction/Member Observing

#### Main Presentation:

Telescopes & Optics      Jack Brisbin (University Lowbrows)

### Club Projects/Committees/Member Support

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

### FAAC Equipment Report 7/13/13

Item	Currently Held By:	Date Last Verified
<b><u>Telescopes</u></b>		
4" Dobsonian	George Korody	2/7/13
4 ½ " Galileo Alt/Az Reflector	James French	6/11/13
8" Orion 8XTi Dobsonian	Matthew Kehoe	7/12/13
4" Donated Reflector in need of repair	George Korody	4/4/13
<b><u>Presentation Tools</u></b>		
Projector	Gordon Hansen	6/12/13
Projection Screen 8'	Bob MacFarland	5/2/13
Speaker System w/wireless mic	Bob MacFarland	3/12/13
Bullhorn	Gordon Hansen	4/10/13
DVD Player	Gordon Hansen	4/10/13
Projection Screen 6'	Gordon Hansen	5/2/13
<b><u>Demonstration Tools</u></b>		
Weight On Planets Scale	Bob MacFarland	6/11/13
Lunar Phase Kit	Bob MacFarland	3/12/13
100 ft Scale Model Solar System Kit	Bob MacFarland	3/12/13

(continued on Page 5)



## Astro Imaging SIG

Gordon Hansen

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 **August 8th**. The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

## FAAC Events 2013

**Saturday July 27th-28th - Makers Fair at the Henry Ford**

**Saturday August 10th - Club Picnic & Beginner's Night at Island Lake**

**Thursday September 5th-8th - Great Lakes Star Gaze in Gladwin, MI**

**Friday September 27th-28th - Astronomy at the Beach at Kensington Metro Park**

*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.

## Member Photos



*Above: Photo taken by Greg Knekleian through Ken Anderson's large Dob. No processing. 20mm Ethos eyepiece in lens discovery.*

## FAAC Equipment Report 7/13/13

*(continued from Page 4)*

Display Items		
Astronomy Event Sign (3' X 6')	Gordon Hansen	4/10/13
PVC Display Board - Folding	Bob MacFarland	4/4/13
Banner – Large (32" X 16')	Bob MacFarland	6/11/13
Banner – Medium (24" X 48")	Bob MacFarland	6/11/13
Banner – Small (24" X 32")	Bob MacFarland	6/11/13
Tri-Fold Presentation Boards	Don Klaser	3/13/13
Tri-Fold Poster Board (Early Club Photos)	George Korody	2/7/13
Other		
Sky Quality Meter	Syed Saifullah	7/13/13
Canopy (10' X 10')	Greg Ozimek	6/27/13
Equipment Etching Tool	Dennis Salliotte	7/12/13
Pop Cooler	Michael Dolsen	5/23/13

# FAAC General Meeting Minutes

## June 27th, 2013

By Doug Bauer

### Opening:

The meeting was called to order in the Berry Auditorium at 5:35 PM by President, Gordon Hansen. All attendees introduced themselves. Gordon welcomed new members and guests. 38 people were in attendance.

### Observing Experiences:

- Ken A. talked about his observing experiences tracking the ISS.
- Doug B, Tim C, John M, Bob M all attended the Summer Skies at Macomb event on Friday, June 14th.
- John L. had 7 perfect nights of observing in Arizona at 7,00 ft with a 36" Dob.

### Whats Up in June?

John Schroer gave a presentation on objects for viewing in July. He also showed two videos: one of a time lapsed video of Scorpius rising and another on the night sky at Yosemite Park.

### Main Program:

Churchill High School Astronomy Programs and Club - Kevin Reina  
Kevin described the Astronomy Club that he established and leads at Churchill High School:  
Meet every Tuesday after school  
Practice using their 8" Orion SkyQuest GoTo Dob  
Bulletin Board at the school to expose the rest of the school to facts about astronomy  
Hang out with Friends and have fun.

Kevin is looking for:

- Experienced observers to help select future equipment
- Donations of money or equipment
- Assistance in using the Orion Sky Quest
- Astro-Photography assistance

Kevin also described his astronomy classes:

- Observation based
- Elective for Seniors
- Must have completed Biology, chemistry, and Physics
- Most students are college bound
- Questions and class discussion periods
- Intro to Cosmos and The Universe Series
- No State required curriculum for Astronomy

- Allows Freedom to teach more than Earth Science

One of Kevin's past students (Steven Marcio) showed pictures he had taken of the sky at different locations in Michigan

### Tech Talk:

StarGate - Construction of My Observatory - Frank Ancona

Frank showed photos and described of the various stages of constructing his observatory in his backyard in Livonia.

### Business Meeting:

- Secretary's Report in Star Stuff - Approved  
Treasurers Report in Star Stuff - Approved  
Equipment Report was presented by Equipment Manager, Dennis Salliotte  
A change to the FAAC Bylaws was proposed and read at the meeting. The change is meant to address a part of the bylaws that says that club assets cannot be used to the benefit of any individual. The change would allow loaning of specific club assets to individuals to enhance their skills and knowledge. It would cover things like: club scopes, books, Sky Quality meter, and other such assets.

The wording is as follows with the change underlined and bolded:

### ARTICLE 1 SECTION 3 USE OF INCOME OR ASSETS

Any income or assets of the ASTRONOMY CLUB shall not inure, in whole or in part, to the direct or indirect benefit of any individual and shall be employed only in the pursuit of the ASTRONOMY CLUB objectives as set forth herein, Article 1, Section 4 OBJECTIVES, except that the Executive Board is empowered to set up procedures for the loaning of books and other ASTRONOMY CLUB assets to individual members for the enhancement of skills and knowledge of said individual members.

The change will be read at the next FAAC General and discussed and voted on.

### Projects and Events:

- July FAAC Board Meeting has been moved to Tuesday, July 2nd 5:00 PM at Senate Coney Island at the corner of Greenfield and Rotunda in Dearborn

(continued on Page 10)

## HJRO Update

by Greg Knekleian

There wasn't a lot of observing but configuration work continued at HJRO. New t-ring setup, a new Telrad hooked up and a cover for the Telrad. (Does anyone use one of those on a goto scope much?)

Because not a lot of observing happened at the observatory due to weather and my not being available I'll focus a bit on July's beginners night at Island Lake.

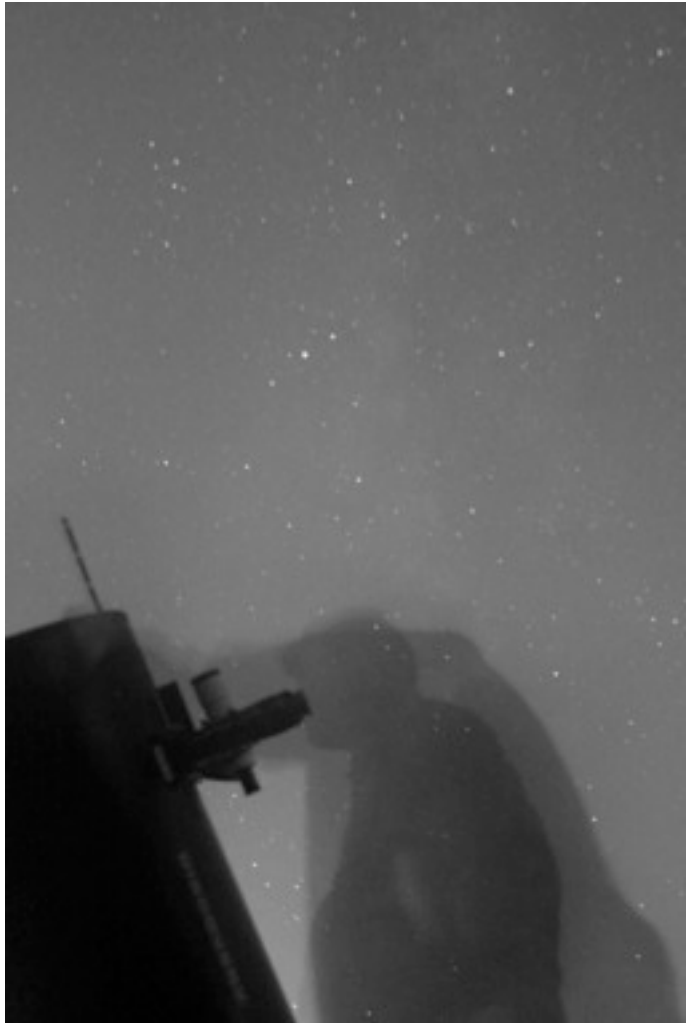
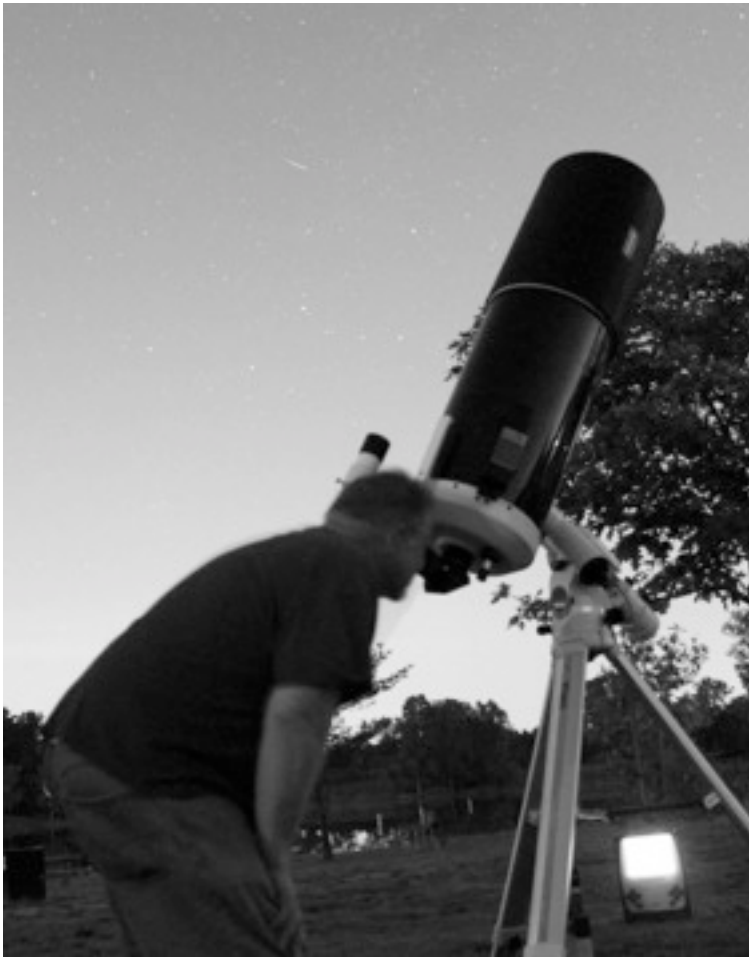
About 20 students arrived to look through telescopes and about 30 FAAC members were there. I didn't take down all the names for this report, but I can say the skies were full of stars and clouds and haze left the area. Many observers left by 11:45PM after having a good time and about four of us stayed until 3:30AM to observe under excellent conditions. There were plenty of lightening bugs and plenty of mosquitos. In spite of being sprayed with repellant twice, I was bit several times. I'm sure others FAAC members donated blood for the hobby as well.

I had so much fun looking through other members telescopes I rarely looked through my little Vixen Binocular setup. What a great time.



*No that's not a comet above the telescope but a lightening bug.  
(Below) early clouds and haze left as the skies darkened.*





FAAC Astronomers and visitors of all ages enjoyed the night skies at Island Lake.

Also I saw about a dozen meteors during the night, some quite bright.





# Fifth Annual FAAC Multi-Club Picnic



## Saturday August 10th, 2013

5pm-Late

Island Lake Recreation Area – Spring Mill Pond



State Park Pass Required.  
You may purchase a day  
pass at the gate if you do not  
have one.

*Image above: Suat Eman / FreeDigitalPhotos.net*

Members of the  
following  
Astronomy Clubs  
and their families:

All Ford

Ford Amateur  
Astronomy Club

University Lowbrows

Oakland Astronomy  
Club

Seven Ponds  
Astronomy Club

Warren Astronomical  
Society

SEMSA Soaring Club

Henry Ford  
Community College

Bring your scope  
or binoculars for  
observing.



*Image above: Jennifer Zdanowski*

FAAC will provide hamburgers, hot dogs,  
veggie burgers, soft drinks, plates & utensils

Please bring a dish to pass

salads, snacks, fruit, desserts.....



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



## FAAC General Meeting Minutes June 27th, 2013

*(continued from Page 6)*

### **Projects and Events:**

- July FAAC Board Meeting has been moved to Tuesday, July 2nd 5:00 PM at Senate Coney Island at the corner of Greenfield and Rotunda in Dearborn
- Beginners Nights 7:00 PM:
  - July 13th at Island Lake
  - August 10th at Island Lake - Also the FAAC Multiclub Picnic (begins at 5:00 PM)
  - October 12th - at Lake Erie MetroPark - Erie Skies Event
- July 13 - Warren Astronomical Association multiclub picnic - 4:00 PM
- July 20 - 7:00 PM - Seven Ponds - Harlon Neuville - NASA Mission Control - will present on the Apollo 11 mission
- July 27, 28 - Makers Fair at The Henry Ford - James French is looking for more volunteers to man the FAAC Booth and bring Solar Scopes
- September 5-8 - Great Lakes Star Gaze - Gladwin
- September 27, 28 - Astronomy At the Beach at Kensington MetroPark

Dale Partin described working with Lutheran High North to establish an astronomy program. He is mentoring students on calculating orbits of Jupiter's moon, determining the speed of light by observing Io's movement. He is looking for donations of electronic tracking telescopes or is willing to purchase reasonably priced used equipment for the program.

The meeting was adjourned by President, Gordon Hansen at 7:45 pm.