



Volume 22, Number 5

May 2012

## In This Issue

### Page One

**Thank Goodness for Magnetism**

**Presidents Corner**

### Inside Stuff

**2 Astro-Imaging SIG**

**4 Treasurers Report**

**4 Meeting Agenda**

**4 Classifieds**

**5 FAAC Meeting Minutes - April 26, 2012**

**6 HJRO Update**

## Thank Goodness for Magnetism

By: Dr. Tony Phillips

Only 93 million miles from Earth, a certain G-type star is beginning to act up.

Every 11 years or so, the solar cycle brings a period of high solar activity. Giant islands of magnetism—"sunspots"—break through the stellar surface in increasing numbers. Sometimes they erupt like a billion atomic bombs going off at once, producing intense flares of X-rays and UV radiation, and hurling massive clouds of plasma toward Earth.

This is happening right now. Only a few years ago the Sun was in a state of deep quiet, but as 2012 unfolds, the pendulum is swinging. Strong flares are becoming commonplace as sunspots once again pepper the solar disk. Fortunately, Earth is defended from solar storms by a strong, global magnetic field.

In March 2012, those defenses were tested.

At the very beginning of the month, a remarkable sunspot

appeared on the Sun's eastern limb. AR1429, as experts called it, was an angry-looking region almost as wide as the planet Jupiter. Almost as soon as it appeared, it began to erupt. During the period March 2nd to 15th, it rotated across the solar disk and fired off more than 50 flares. Three of those eruptions were X-class flares, the most powerful kind.

*(continued on Page 3)*

## President's Corner

By Gordon Hansen

This is going to be a very short column this month. This has been one of those months that just flew by and I found myself behind the eight ball.

There are two events coming up that you don't want to miss:

- Beginner's Night – May 26th
- Transit of Venus – Tuesday,

June 5th. If you aren't aware this is your last chance to see Venus silhouetted against the sun. This event doesn't occur again until December 2117. We will gather, along with the other GLAAC clubs, at the east boat launch at Kensington Metropark at 5:30 pm.

# STAR STUFF

May 2012 - Vol. 22 No 5

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: 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 Kirchoff. See more of John's photos at:*

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

## 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 **June 14th**. The meeting room location - HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

## FAAC Events 2012

**May 26th-Beginner's Night-Island Lake 7 p.m.**

**June 5th - Venus Transit - Kensington**

## Congratulations Bob MacFarland!



Bob MacFarland is presented the FAAC Sirius Award by FAAC President Gordon Hansen



*Multiple-wavelength view of X5.4 solar flare on March 6, captured by the Solar Dynamics Observatory (SDO) in multiple wavelengths (94, 193, 335 angstroms).  
Credit: NASA/SDO/AIA*

## Thank Goodness for Magnetism

*(continued from Page 1)*

As the eruptions continued almost non-stop, Earth's magnetic field was buffeted by coronal mass ejections or "CMEs." One of those clouds hit Earth's magnetosphere so hard, our planet's magnetic field was sharply compressed, leaving geosynchronous satellites on the outside looking in. For a while, the spacecraft were directly exposed to solar wind plasma.

Charged particles propelled by the blasts swirled around Earth, producing the strongest radiation storm in almost 10 years. When those particles rained down on the upper atmosphere, they dumped enough energy in three days alone (March 7–10) to power every residence in New York City for two years. Bright auroras circled both poles, and Northern Lights spilled across the Canadian border into the lower 48 states. Luminous sheets of red and green were sighted as far south as Nebraska.

When all was said and done, the defenses held—no harm done.

This wasn't the strongest solar storm in recorded history—not by a long shot. That distinction goes to the Carrington Event of

September 1859 when geomagnetic activity set telegraph offices on fire and sparked auroras over Mexico, Florida, and Tahiti. Even with that in mind, however, March 2012 was remarkable

It makes you wonder, what if? What if Earth didn't have a magnetic field to fend off CMEs and deflect the most energetic particles from the Sun.

The answer might lie on Mars. The red planet has no global magnetic field and as a result its atmosphere has been stripped away over time by CMEs and other gusts of solar wind. At least that's what many researchers believe. Today, Mars is a desiccated and apparently lifeless wasteland.

Only 93 million miles from Earth, a G-type star is acting up. Thank goodness for magnetism.

With your inner and outer children, read, watch, and listen in to "Super Star Meets the Plucky Planet," a rhyming and animated conversation between the Sun and Earth, at <http://spaceplace.nasa.gov/story-superstar>

*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

May 9, 2012

By Chuck Jones

### Ford Amateur Astronomy Club Balance Sheet As of May 9, 2012

	May 9, 12
<b>ASSETS</b>	
<b>Current Assets</b>	
Checking/Savings	
FAAC Savings	
GLAAC	2,317.15
Equipment	1,814.22
FAAC Club Savings	451.08
Scholarship	63.06
<b>Total FAAC Savings</b>	4,645.51
CD 89265268	1,100.38
CD 200599272	1,055.28
CD 205196033	1,000.00
Checking	667.26
Petty Cash Account	87.48
<b>Total Checking/Savings</b>	8,555.91
<b>Total Current Assets</b>	8,555.91
<b>TOTAL ASSETS</b>	<b>8,555.91</b>
<b>LIABILITIES &amp; EQUITY</b>	
<b>Equity</b>	
Opening Balance Equity	8,890.38
Net Income	137.08
Retained Earnings	-471.55
<b>Total Equity</b>	8,555.91
<b>TOTAL LIABILITIES &amp; EQUI...</b>	<b>8,555.91</b>

## Meeting Agenda - May 24th

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

### Opening/Introduction/Member Observing

#### Main Presentation:

Dark Skies Frank Ancona

#### Tech Talk:

Ask the Astronomer All

### Club Projects/Committees/Member Support

- May 24th –Beginner's Night - Island Lake - 7:00 pm
- June 5th – Kensington Metropark East Boat Launch - Observe the Transit of Venus, 5:30pm – sunset
- Open Discussion

### Club Business/Secretary/Treasurer/Equipment Report

## 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: [lynncats@wowway.com](mailto:lynncats@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 Blaszak 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.



# FAAC General Meeting Minutes April 26th, 2012

By Bob MacFarland substituting for Doug Bauer Secretary

## Opening:

- The meeting was called to order in the Berry Auditorium at 5:30 pm by FAAC Vice-President, Jon Blum
- All attendees introduced themselves. 45 persons were present.
- Jon Blum announced that Bob MacFarland was the recipient of the annual FAAC Sirius Award.
- Members who contributed their observing experiences included: Ken Anderson, John Blum, Chuck Jones and Frank Ancona. Afterwards, a short "Ask the Astronomer" session followed beginning with the question "Why does it cloud up whenever someone buys astronomy equipment?" No authoritative answer was established.

## What's Up In April/May:

- Two informational videos were presented along with the sky schedule. These included: Lunar Reconnaissance Orbiter photographs of the Apollo 15, 16 & 17 mission sites and a Planetary Resources Inc. video outlining their plan for mining near - earth asteroids. The Sky schedule included the following:
  - April 29th - 1st quarter moon
  - May 4th & 5th - Eta Aquarid meteor showers
  - May 5th - Full moon
  - May 12th - Last quarter moon
  - May 13th - Jupiter is in conjunction with the sun
  - May 20th - Annular solar eclipse - 8:43 pm and a New moon
  - May 22nd - Venus is 5 deg. north of the Moon
  - May 28th - 1st quarter moon
  - Mars is in Leo all of May
  - Saturn returns to the southern evening sky.
  - June 5th - Transit of Venus - last one for 108 years - don't miss it!
- Deep sky targets were also reviewed by John. These included: M-24 open cluster, the Ring Nebula in Lyra and Omega Centauri.

## Main Program:

Ms. Ardis Herreld, an Earth Science teacher from Grosse Pointe North High School gave an excellent feature presentation entitled "What is Radio Astronomy". This included a detailed overview of how radio waves were discovered in the 1930s originating from space, the key figures involved and its evolution from that time. She overviewed what types of electromagnetic waves are included in this category, how they are produced and where they fall on the electromagnetic spectrum. Ms. Herreld then reviewed the importance of the study of radio astronomy today, what contemporary efforts are ongoing and where these programs are taking place. This was followed by detailing the work of her own Grosse Pointe North HS (GPNHS) student astronomy club called the Radio Astronomy Telescope (RATz) and

how they built a radio telescope on top of the high school roof.

After a number of questions, Ms. Herreld invited the Ford Amateur Astronomy Club to hold their 4th Thursday of the month general membership meeting at GPNHS with the RATz club. A tour of their radio telescope and facilities would be included. (The FAAC board will determine what date would be appropriate for this). In turn, FAAC officers invited Ms. Herreld and all of the GPNHS RATz members to join in on any of our FAAC activities at no cost.

## Tech Talk:

Tim Campbell gave a very interesting talk entitled "Calculating the Distance to the Sun". In it, he covered why in a world of global expansion with primitive navigational tools in the 16th and 17th centuries the answer to this question was of major significance. This led to the experimentation of determining the distance to Venus during its solar transit. Tim reviewed how Edmund Halley determined that it could be possible to determine the distance to Venus, and the Sun using parallax angles.

Since this could only be done during a transit of Venus (a rare event - only four times every 243 years) expeditions were sent out on a global scale to collect data during the 1761 event. Tim then took us through how Kepler's laws and trigonometry were applied to derive these distances. Tim was kind enough to post this PPT file on the FAAC Yahoo site if anyone wants to use it.

## Business Meeting:

Secretary's Report was printed in the StarStuff and approved as printed.  
Treasurer's Report was printed in the StarStuff and approved as printed.

## Upcoming Project and Events:

- April 28th - Astronomy Day - Kensington Metropark - Solar Observing during the day.
- April 28th - Beginner's Night at Island Lake - (7:00 PM)
- May 12th - Inter-club Observing Event at D-Bar-A Scout Camp near Metamora.
- May 19th and 20th - Kensington Metropark - Heron Days - daytime solar observing.
- May 26th - Beginner's Night at Island Lake - (7:00 PM)
- June 5th - Venus Transit - Kensington Metropark - East Boat Launch (5:30 PM until Sunset) - take Kent Lake exit off of I-96. Take first left after ticket booth.

(continued on Page 8)

## HJRO Update

By Greg Knekleian

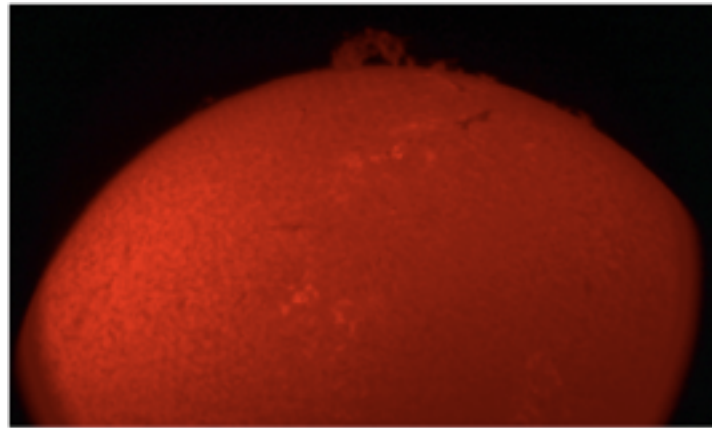
So much has been happening lately with observing, this is being written and submitted late. (*Sunday before the general meeting.*)

We had good weather and clear skies for many great observing evenings the past month. Saturday (5-18) was especially clear, we saw rock solid views of Saturn with a 10mm eyepiece on the C14 providing 391x. The Stellacam was giving clear steady video views of Saturn from the C14, at more than 800 power!

HJRO observing regulars, Art Parent, Dan Barriball, Brian Kutscher, Rick Arzadon, Tim Dey and I observed common objects like Saturn, Mars, Venus, M13, the sun and many other objects this month at HJRO and elsewhere. I went with Art Parent to meet Tim Dey out at Lake Erie to see the "super moon" rising over the water during the super moon event. Dan Barriball phoned us during that time and was observing it from a park in Wyandotte.

### Solar viewing 5-18-2012

Friday morning: *I had a dream about solar viewing. In the dream I opened HJRO early and showed hundreds of students the sun.* I should have took the hint and woke up. I should have opened up the observatory for viewing, making that dream a reality. But I was busy and ended up opening observing at 4PM. I met Tim Dey to do a little solar observing. I sent a last minute FAAC yahoo announcement (*sorry, it bounced back and I didn't notice.*) Tim and I called and encouraging some members to get out and observe the sun. About four FAAC astronomers arrived to view the sun at HJRO. Harold Thomason and his wife were driving by the neighborhood, happened to stop by. Harold remarked had he known about this flare he would have taken photos of the sun at home. (*He has a 4 inch Daystar HA t-scanner setup.*)



Large solar flare: 8mm eyepiece on Lunt Solar scope at HJRO, handheld Canon EOS photo, adjusted in "Filterstorm" on iPad.

We also chatted with Greg Ozimek over Skype and Facetime. Greg was a virtual visitor during the solar event observing, using his new iPad.

I took about a dozen photos during the Friday solar viewing. Tim Campbell stopped by and took a look before returning home to view the sun through his excellent new Lunt Solar telescope. Rick Arzadon also stopped by and took some very nice shots through the eyepiece with a point and shoot camera. Rick didn't stay around long and mentioned he had "stubbed his toe and bent it badly", at home earlier in the day. Rick actually drove to a 24 hour clinic afterwards and found out he had a broken toe. How many astronomers will observe and climb a step ladder with a broken toe? Rick deserves some kind of observing award for that!

**Saturday 5-19:** I decided to stay around town locally and skip the Kensington solar viewing. I found out the HFCC Astronomy club was having a party locally and dropped by briefly inviting club members out to HJRO for evening viewing. I put out a FAAC yahoo announcement as well.

## HJRO update (continued)

Brian Kutscher, Dan Barriball, Art Parent arrived as well as a new visitor who has been to some FAAC meetings. This new visitor "finally found HJRO open". He had trouble finding the small gate when he came in the school parking lot, (it's close to the Orange and Blue ticket booth.) HJRO needs some large signs closer to the lot and street.

### Saturday's viewing.

We looked at a half a dozen objects and also discovered some tracking errors earlier in the week. Some long exposures of M51 were giving us problems. Trails in many of the photos which were not normal trails, but star trails from a movement as the telescope tracked. We discovered the entire mount moves a bit when someone jumps on the floor or even the cement slab outside the observatory. Some kind of column support issue.

Art, Dan, Brian and I chatted and looked at some objects, and as the evening grew late, more than a dozen FAAC astronomers arrived. This was well after midnight. They came in a convoy from their party. (There were over 20 people at their club party.) Many were first time visitors and they looked at Saturn, Mars and the Ring Nebula. We took some photos of the group as they posed for low light long exposure photos. (I try to focus on the stars and take a picture of the group and the observatory dome in these photos. If people move a ghost effect of trails appears in the photograph and it's not tightly focused on the visitors face, but the stars in the background can be seen.)

### 12:30AM

Soon about 40 cars started pouring into the parking lot. They parked silently and turned off their headlights. I went out and discovered parents were waiting for kids returning from a trip to Cedar Point. Brian Kutscher went out and invited every parent and family to visit HJRO.



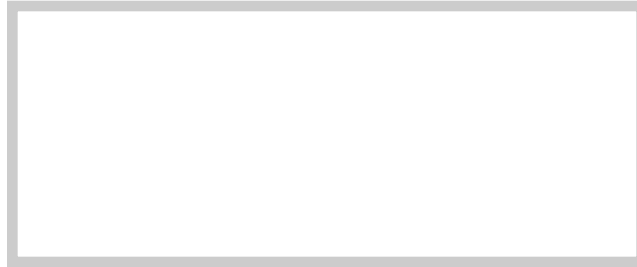
HFCC Astronomy club and a few others stand still for this photo.

Three or four families took us up on our offer. One of the fathers and some of his children stayed in HJRO until almost 3am, viewing looking and asking questions.

We looked at some objects with the Stellacam. By 3:30am, Art Parent, a first time visitor and I remained to observe. We alternated between viewing objects visually and using the Stellacam on the C14. We looked at the Eagle Nebula, and our visitor wanted to see Pluto. We used the Stellacam to easily see Pluto on a video monitor. We spent about an hour working our way and syncing the video setup to finally get Pluto on the screen and identified. Finally at nearly 4am Art left.

**All night visitor:** The visitor stayed even later, we looked at more objects and talked almost until sunrise. Last objects viewed: the blinking Nebula, Bessel's star, the double double, the double cluster and finally Neptune. The ISS was due to fly over around 5am. We watched the ISS flyover as the sky started to change color from a rising sun. A great night of observing. And the first time a "new visitor" stayed the entire night to observe.

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



## FAAC General Meeting Minutes April 26th, 2012

*(continued from Page 5)*

### **New Business:**

- Bob MacFarland (248-321-8579) announced that the Cranbrook Institute of Science is looking for persons to staff their observatory after their August renovation.
- Dan Barriball (734-552-5171) has taken the Board assignment to identify the potential opportunities of the social media (Facebook, Twitter, etc.) for FAAC. He asked for ideas from club members on how these tools could be utilized for FAAC events, membership, etc.
- The meeting was adjourned at 8:35pm.
- Thanks to Greg Ozimek for bringing the pizza and to Ellen Duncan for bringing the pop!