



# STAR STUFF

The Newsletter of the Ford Amateur Astronomy Club

Volume 23, Number 2

February 2013

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## Tackling the Really BIG Questions

by Diane K. Fisher

How does NASA get its ideas for new astronomy and astrophysics missions? It starts with a Decadal Survey by the National Research Council, sponsored by NASA, the National Science Foundation, and the Department of Energy. The last one, New Worlds, New Horizons in Astronomy and Astrophysics was completed in 2010. It defines the highest-priority research activities in the next decade for astronomy and astrophysics that will “set the nation firmly on the path to answering profound questions about the cosmos.” It defines space- and ground-based research activities in the large, midsize, and small budget categories.

The recommended activities are meant to advance three science objectives:

1. Deepening understanding of how the first stars, galaxies, and black holes formed,
2. Locating the closest habitable Earth-like planets beyond the solar system for detailed study, and

3. Using astronomical measurements to unravel the mysteries of gravity and probe fundamental physics.

For the 2012–2021 period, the highest-priority large mission recommended is the Wide-field Infrared Survey Telescope (WFIRST). It would orbit the second Lagrange point and perform wide-field imaging and slitless spectroscopic surveys of the near-infrared sky for the community. It would settle essential questions in both exoplanet and dark energy research and would advance topics ranging from galaxy evolution to the study of objects within the galaxy and within the solar system.

Naturally, NASA’s strategic response to the recommendations in the decadal survey must take budget constraints and uncertainties into account.

The goal is to begin building this mission in 2017, after the launch of the James Webb Space Telescope. But this timeframe is not assured. Alternatively, a different, less ambitious mission that also address the Decadal Survey science objectives for WFIRST would remain a high priority.

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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.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).

*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/>



*Clusters of galaxies collide in this composite image of “Pandora's Cluster.” Data (in red) from NASA's Chandra X-ray Observatory show gas with temperatures of millions of degrees. Blue maps the total mass concentration (mostly dark matter) based on data from the Hubble Space Telescope (HST), the European Southern Observatory's Very Large Telescope (VLT), and the Japanese Subaru telescope. Optical data from HST and VLT also show the constituent galaxies of the clusters. Such images begin to reveal the relationship between concentration of dark matter and the overall structure of the universe.*

## Tackling the Really BIG Questions

*(continued from Page 1)*

The Astrophysics Division is also doing studies of moderate-sized missions, including: gravitational wave mission concepts that would advance some or all of the science objectives of the Laser Interferometer Space Antenna (LISA), but at lower cost; X-ray mission concepts to advance the science objectives of the International X-ray Observatory (IXO), but at lower cost; and mission concept studies of probe-class missions to advance the science of a planet characterization and imaging mission.

For a summary of NASA's plans for seeking answers to the big astrophysics questions and to read the complete Astrophysics Implementation Plan (dated December 2012), see <http://science.nasa.gov/astrophysics/>. For kids, find lots of astrophysics fun facts and games on The Space Place, <http://spaceplace.nasa.gov/menu/space/>.

*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 February 11, 2013

By Chuck Jones

### Ford Amateur Astronomy Club Balance Sheet

As of February 11, 2013

	Feb 11, 13
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
CD 200599272	1,056.86
CD 205196033	1,001.82
CD 89265268	1,102.84
Checking	1,301.51
<b>FAAC Savings</b>	
Equipment	1,218.08
Scholarship	286.06
<b>Total FAAC Savings</b>	1,504.14
<b>Petty Cash Account</b>	112.20
<b>Total Checking/Savings</b>	6,079.37
<b>Other Current Assets</b>	
<b>GLAAC</b>	1,863.35
<b>Total Other Current Assets</b>	1,863.35
<b>Total Current Assets</b>	7,942.72
<b>TOTAL ASSETS</b>	<b>7,942.72</b>
<b>LIABILITIES &amp; EQUITY</b>	0.00

### Club Wear

You can purchase clothing with our FAAC club logo on it from either one of two sources. You can buy from Diane Worth, by calling her at 248-980-7832. Or 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 - February 28th

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

### Opening/Introduction/Member Observing

#### Main Presentation:

Spectroscopy Claude Pruneau

### Club Projects/Committees/Member Support

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

## Items For Sale

Up for sale is my recently acquired Orion Starblast 6. I bought it off Astromart a few months ago, and it is in truly like-new condition. I have only had a couple opportunities to take it out and it performs well. I have one too many scopes and this one is overshadowed by my 8" dob. Scope comes with dust cover and red dot finder, but no eyepieces. Retail for \$279 currently plus \$30 s/h.

**PRICED TO SELL: \$175**

Pictures are posted here:

<http://groups.yahoo.com/group/FordAstronomyClub/photos/album/982235276/pic/list>

Contact Syed at: (734) 945-5162 if interested or e-mail me.

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

Topics invited. Pizza served.

## FAAC Events 2013

**Thursday March 14th - SIG Meeting-Berry  
Amphitheater Auditorium (HFCC)**

**Saturday, March 16th - Annual Expo & Swap  
Meet**

**Friday, April 12th - Lake St. Claire: Sidewalk  
Astronomy**

**Saturday, April 20th - Astronomy Day  
(Beginner's Night)**

**Saturday, May 4th – Club banquet**

*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 5)*

- 8 inch Zhumell Dobsonian Telescope
- F/5
- 2 inch Crawford low profile focuser with 1.25 inch adapter.
- 26 mm 2 inch eyepiece and 9 mm 1.25 inch eyepiece
- 8 x 50 right angle finderscope
- Laser Collimator
- cooling fan with battery pack
- 2 " and 1.25" eyepiece rack and glow-in-the-dark tape on bearing box.
- Extras Include: Desert Storm Shield, padded carrying case for optical tube, Telrad
- \$300 Firm Call John 248-538-1514 or email to [ka8grh@gmail.com](mailto:ka8grh@gmail.com)

## REMINDER: FAAC membership renewals

- Annual–New Member: \$30
- Annual–Renewal: \$25 (\$30 after Jan 31)

Send your check for \$25 to:

FAAC  
P.O. Box 7527  
Dearborn, MI 48121-7527

Or bring your money to the FAAC General Meeting at 5:30 PM in the Berry Amphitheater Auditorium in the Administrative Services and Conference Center on the campus of Henry Ford Community College.

Membership includes the STAR STUFF newsletter, discounts on magazines, discounts at selected area equipment retailers, and after-hours access to the Island Lake and Lake Erie Metropark observing sites, use of the FAAC Yahoo Group, and mentoring program.



# FAAC General Meeting Minutes January 24th, 2012

By Jim Frisbee

The meeting was called to order in the Berry Auditorium at 5:30 pm by President, Gordon H. All attendees introduced themselves. Members contributed their observing experiences. Several members discussed observing at the Lake Erie Ice Daze. Gordon welcomed new members & guests.

## What's Up in the Night Sky - Gordon Hansen

President Gordon H. presented interesting objects for viewing in February

### Main Speaker:

Matthew Linke, Director, U of M Museum of Natural History, presented: "A funny thing happened on the way out of the solar system"

### Business Meeting:

-Elections:

Bob F. introduced the slate of officers for 2013 which included a re-up by each existing officer. The proposed slate of officers was approved by acclimation.

-Secretary's Report as published in StarStuff was approved.

-Treasurer's Report as published in StarStuff was approved.

-A Call for Sirius Award Nominations was made.

### Projects and Events:

- Mar. 16, 9 am-3 pm.: FAAC Swap Meet (see flyer on Club sites).

- May 4, 6 pm-?: FAAC Banquet, at Karls' Kabin, (See flyer on Club sites).

- President Gordon opened the subject of having a Dark Sky Observing Session around the new Moon during the warm weather months. Discussion will be continued during a future meeting.

The meeting was closed by President, Gordon H. at 7:30pm.

<u>Item</u>	<u>Currently Held By:</u>	<u>Date Last Verified</u>
<u>Telescopes</u>		
4" Dobsonian	George Korody	2/7/13
4 1/2 " Galileo Alt/Az Reflector	Bob MacFarland	1/10/13

8" Orion 8XTi Dobsonian	Matthew Kehoe	1/19/13
<u>Presentation Tools</u>		
Projector	Gordon Hansen	2/7/13
Projection Screen	Bob MacFarland	1/10/13
Speaker System w/wireless mic	Bob MacFarland	1/10/13
Bullhorn	Gordon Hansen	2/7/13
DVD Player	Gordon Hansen	2/7/13
<u>Demonstration Tools</u>		
Weight On Planets Scale	George Korody	2/7/13
Lunar Phase Kit	Bob MacFarland	1/10/13
100 ft Scale Model Solar System Kit	Bob MacFarland	1/10/13
<u>Display Items</u>		
Astronomy Event Sign (3' X 6')	Greg Knekleian - HJRO	1/7/13
PVC Display Board - Folding	Gordon Hansen	2/7/13
Banner - Large (32" X 16')	Bob MacFarland	1/10/13
Banner - Medium (24" X 48")	Bob MacFarland	1/10/13
Banner - Small (24" X 32")	Bob MacFarland	1/10/13
Tri-Fold Presentation Boards	Don Klaser	1/13/13
Tri-Fold Poster Board (Early Club)	George Korody	2/7/13
<u>Other</u>		
Sky Quality Meter	Art Parent	1/3/13
Canopy (10' X 10')	Greg Ozimek	2/7/13
Equipment Etching Tool	Dennis Salliotte	2/14/13
Dennis Salliotte equipment@fordastronomyclub.com		

## HJRO Update

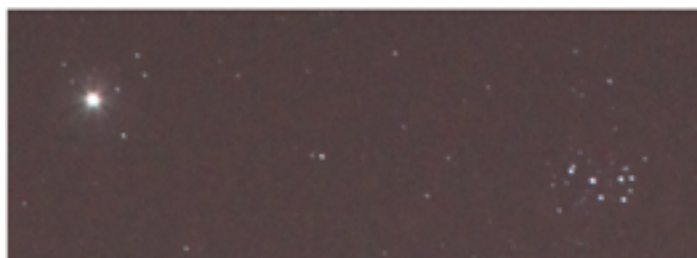
by Greg Knekleian

Not much observing has happened over the few months. December: We had members of the HFCC club join us for one evening during a meteor shower. We had a few of the regular HJRO visitors show up to observe, but for the most part clouds and cold weather kept the doors closed during the past month. Jupiter was in opposition early December and is still giving nice detailed views, perfect for early evening viewing.

Tim Campbell gave a solar presentation to students, but clouds kept us from opening up the observatory during those science class presentations. The presentations were a big success and the teachers and students will look at the sun through our solar setup when clouds and volunteers allow HJRO to be open.

With Backyard EOS (\$30) I captured 2000 frames and processed an image of Jupiter. The nice thing about this program is the it can record at 5x power instead of 10x - the normal zoom for the "Canon EOS" live view software. A 5x digital view option for the EOS is a good match for planetary and lunar photography.

I also took a still of the general sky using the Canon T1i in the big picture below. Jupiter is pretty close to M45, (about 9 degrees away). I could almost fit both objects in the FOV of a wide field 7 by 35 binoculars. This is about as close as Jupiter will get to M45, by the end of February it will be moving further away.



## HJRO Update (continued)

The Lake Erie Metro Park (LEMP) Ice Daze event happened January 19th. At least a dozen FAAC astronomers showed up at the event. Some of the park activities (sled dogs) were cancelled due to the strange warm weather; sled dogs can't have a race without snow. Overcast skies hampered any solar observing attempts. I arrived late, just as the 4PM talk was starting. I saw much of that presentation, the classroom was packed so I viewed the talk from the doorway.

**Ham radio:** A small group of FAAC astronomers who are also into Ham radio met near the far end of the parking lot where a frequent visitor and new member James French sat up a ham radio antenna. I ran into Art Parent, Rick Arzadon and Jeff Hinline during the 4pm talk presentation in the lobby.

A solar talk and presentation was presented by Tim Campbell. It was packed full of information, very informative, Tim covered a lot of ground. Gordon gave a quick presentation about types of telescopes and Ken Anderson, Dennis Salliotte and I were given a chance to discuss some of the telescopes on display and their features that we brought to show the public. There was a lot presented, maybe too much stuff for many of the younger attendees.

The weather predictions and doppler radar were not looking good for observing. About 15 FAAC members ate at the restaurant. Leaving dinner the sky looked overcast. Many of the FAAC astronomers decided to head home, others like Ken Anderson decided to go back to LEMP to see if the weather would improve. Ken Anderson, Gordon Hanson, Dennis Salliotte, Tim Dey, Matthew Kehow and I returned to the Marsh Land center parking lot.

Within 20 minutes thin cloud breaks started to appear. Pulling out the BT80 Binocular telescope, I started showing visitors the moon at first.

Soon other targets started to peek through the clouds. Jupiter, M42, the double cluster and M45, became targets of early opportunity.

By 10PM all the clouds left the sky clear.

Ken Anderson brought out his 16.5 inch Dobsonian. Steady 20-25 mph winds made observing challenging. Gordon Hansen had the club telescope out and was showing a new club member Matthew Kehoe how the telescope setup works. At least a dozen visitors were looking at a half a dozen objects and asked questions. I spent a little bit of time showing some visitors astronomy photos and apps on my iPad. One young visitor wanted to see a picture of Pluto. I was able to show him a Stellacam photo we took of Pluto at HJRO.

Ken found a handful of Messier and some other objects, like the Eskimo nebula for viewers to see. Ken also pointed my Bt-80s at a few open clusters before we left. We had to adjust the legs of my tripod to aim the Binocular up high to the Meridian. (I probably should have a custom wedge part made for the rig so I can aim it near the meridian.) By 11:30PM all the visitors left, so the FAAC astronomers left as well. The winds hampered the viewing a bit and caused a nice wind chill.

James French and Matthew Kehoe wanted to know if I'd open up HJRO. Although it was windy the night temperatures were in the low 40s. We ended up spending about 2 hours at HJRO. The wind was not a problem under the HJRO dome. We ended up viewing many of the same objects we saw at LEMP, but at higher powers. We also looked at a couple galaxies at HJRO, we saw one, the other one (m31).

Sky Conditions example: M42: I could barely make out the sixth star in the trapezium with a 25mm eyepiece. The fifth star was clearly visible to all of us. With a 15mm the sixth star disappeared due to poor seeing.



## HJRO Update (continued)

I actually observed just about as much away from HJRO as at the observatory during January.

Mr and Mrs. Tim Dey, James French, Mr and Mrs. Steve Uitti, Rick Arzadon and I met at the Allen Park hill across from Meijers to observe Mercury and Mars Saturday, February 9th.

Mercury was clearly visible after sunset, Tim Dey was the first to spot it from our location with a pair of binoculars. We had a 10 inch F5.35 Schmidt Newtonian, my F4 homebuilt telescope, the Vixen BT-80 binocular telescope and a couple of 10 by 50 binoculars in Allen Park to view the pair of planets after sunset. Mars was less than 2 degrees below Mercury and clearly in the field of view of all the wide field instrument setups we had.

We had a successful "math night" at the middle school as well. Sandra Macika, Jim Barnes, Tim Dey and I were at the Math night at the middle school. Jim and Sandra brought books for students and meteorites and about 150 people rushed out to the observatory and took a quick tour which Tim Dey and I gave. Visitors were crammed in there like sardines at times, and they were interested in seeing the telescope and watch the dome move. Unfortunately cloud cover eliminated observing during the tour.

Several people called the school asking if HJRO would be open when 2013 DA14 passed, but I decided to keep HJRO closed due to bad weather forecasts. Some FAAC members no doubt spent time watching the asteroid pass on a NASA website, we left a message at the school to let people know about the internet broadcast.



Mercury and Mars February 9th 2013: Rick Arzadon, James French, Steve Uitti and Tim Dey look at Mercury and Mars (inset photo) Quick handheld afocal image from BT-80) at 26x. (Both photos shot with Canon EOS T1i.)

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