



The Newsletter of the Ford Amateur Astronomy Club

Volume 25, Number 4

April 2015

In This Issue

Page One

Is the Most Massive Star
Still Alive?

President's Article

Inside Stuff

4 Treasurers Report

4 Meeting Agenda

6 FAAC Equipment List

8 March 26, 2015
Meeting Minutes

9 FAAC Dinner Banquet

Is the Most Massive Star Still Alive?

By Dr. Ethan Siegel

The brilliant specks of light twinkling in the night sky, with more and more visible under darker skies and with larger telescope apertures, each have their own story to tell. In general, a star's color correlates very well with its mass and its total lifetime, with the bluest stars representing the hottest, most massive and shortest-lived stars in the universe. Even though they contain the most fuel overall, their cores achieve incredibly high temperatures, meaning they burn through their fuel the fastest, in only a few million years instead of roughly ten billion like our sun.

(continued on Page 3)

President's Article

By Tim Campbell

A Night At The Museum

This month we had a request for telescopes at the Michigan Science Center. The Science Center hosted a "Yuri's Night" event in Detroit. These are events held world-wide on the anniversary of the date when a human, Yuri Gagarin, first flew into space.

Both the Warren and Ford clubs brought telescopes to setup outside. The event, run by Art X Detroit, was far larger than I ever imagined... 1400 visitors attended. Visitors of every age and many dressed in space/future-themed outfits.

The science museum was filled to capacity inside (which I'm told is about 500 people) with enormously long lines outside filled with people who are waiting to get in.

Thanks to the abundance of outdoor lighting, no red flashlights were necessary at this event.

(continued on Page 2)

STAR STUFF

April 2015 - Vol. 25 No 4

STAR STUFF is published eleven times each year by:

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

PRESIDENT: Tim Campbell
VICE PRESIDENT: Tim Dey
SECRETARY: Ellen Duncan
TREASURER: Gordon Hansen
WEBMASTER: Greg Ozimek
NEWSLETTER EDITOR: Jennifer Monske

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 College Administration Services and Conference Center in Dearborn. Refer to our website for a map and directions (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.

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: StarStuff@fordastronomyclub.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

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/>

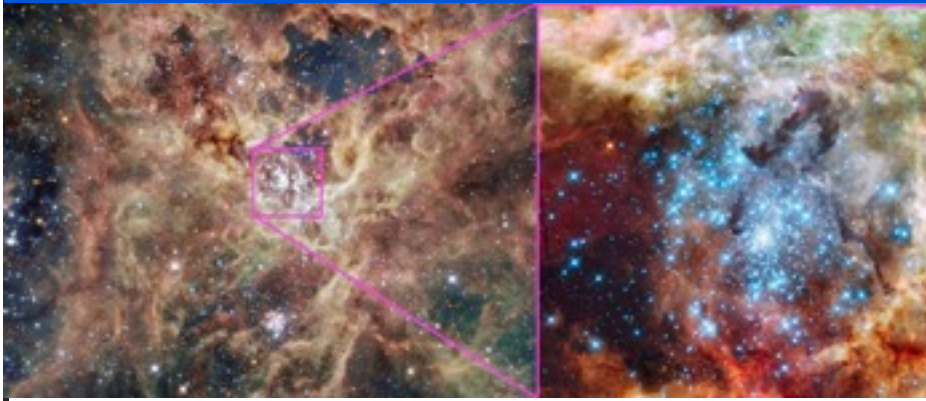
Urban light pollution limited our targets to only the brightest objects... namely Jupiter and a few open clusters (the Moon was in the 3rd quarter — meaning no moon during evening hours.) Jupiter, however, put on quite a show... we had a transit of Io (hard to see) followed by Io's shadow (easy to see). We were there from 8pm until 1am with Io's shadow transit starting at 9:30pm and lasting until 11:50pm. Seeing conditions were above average, making the shadow of Io somewhat easy to see.



The lines at the telescopes were easily as long as they would be during Astronomy at the Beach. Inside, Sandra Macika had a table with her shooting stars. Planetarium shows were running back to back with every seat (114 seats per show) occupied.



(continued on Page 5)



Images credit: ESO/IDA/Danish 1.5 m/R. Gendler, C. C. Thöne, C. Féron, and J.-E. Ovaldsen (L), of the giant star-forming Tarantula Nebula in the Large Magellanic Cloud; NASA, ESA, and E. Sabbi (ESA/STScI), with acknowledgment to R. O'Connell (University of Virginia) and the Wide Field Camera 3 Science Oversight Committee (R), of the central merging star cluster NGC 2070, containing the enormous R136a1 at the center.

Is the Most Massive Star Still Alive?

(continued from Page 1)

(continued from Page 1)

Because of this, it's only the youngest of all star clusters that contain the hottest, bluest stars, and so if we want to find the most massive stars in the universe, we have to look to the largest regions of space that are actively forming them right now. In our local group of galaxies, that region doesn't belong to the giants, the Milky Way or Andromeda, but to the Large Magellanic Cloud (LMC), a small, satellite galaxy (and fourth-largest in the local group) located 170,000 light years distant.

Despite containing only one percent of the mass of our galaxy, the LMC contains the Tarantula Nebula (30 Doradus), a star-forming nebula approximately 1,000 light years in size, or roughly seven percent of the galaxy itself. You'll have to be south of the Tropic of Cancer to observe it, but if you can locate it, its center contains the super star cluster NGC 2070, holding more than 500,000 unique stars, including many hundreds of spectacular, bright blue ones. With a maximum age of two million years, the stars in this cluster are some of the youngest and most massive ever found.

At the center of NGC 2070 is a very compact concentration of stars known as R136, which is responsible for most of the light illuminating the entire Tarantula Nebula. Consisting of no less than 72 O-class and Wolf-Rayet stars within just 20 arc seconds of one another, the most massive is R136a1, with 260 times the sun's mass and a luminosity that outshines us by a factor of seven million. Since the light has to travel 170,000 light years to reach us, it's quite possible that this star has already died in a spectacular supernova, and might not even exist any longer! The next time you get a good glimpse of the southern skies, look for the most massive star in the universe, and ponder that it might not even still be alive.

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

April 9, 2015

By Gordon Hansen

Apr 9, 15

ASSETS

Current Assets

Checking/Savings

10000 · Checking 1,234.66

11000 · FAAC Savings

11100 · FAAC Club Savings 2,927.24

11200 · Equipment 1,978.49

11300 · Scholarship 419.26

11400 · GLAAC 5,566.18

Total 11000 · FAAC Savings 10,891.17

12000 · Petty Cash Account 143.44

13000 · CD's

13100 · CD 200599272 1,061.08

13200 · CD 205196033 1,006.03

13300 · CD 89265268 1,109.04

Total 13000 · CD's 3,176.15

Total Checking/Savings 15,445.42

Total Current Assets 15,445.42

Meeting Agenda - April 23rd

HFC – Berry Auditorium -Admin. Services & Conference Center www.fordastronomyclub.com
5:30

Opening/Introduction/Member Observing

Main Presentation:

Tech Talk:

Club Projects/Committees/Member Support

Club Business/Secretary/Treasurer/Equipment Reports

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

Topics invited. Pizza served.

FAAC Events 2015

April 24th - Livonia Franklin High School Outreach

April 25th - Astronomy Day

May 2nd - Annual FAAC Banquet

Kensington Metropark Nature Center (Daytime Solar)

Michigan Science Center (Daytime Solar)

Beginner's Night at Lake Erie Metropark Nature Center (Evening/Night)

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.

President's Article

(continued from Page 2)

The science center has never hosted an event like this before. They weren't quite sure what to expect, but the event promotor (Art X Detroit) told them to expect a large turn-out with long lines outside (apparently they were not exaggerating.) The promotor and the science center indicated that if successful, they would plan to hold this (or similar) events here in the future. I'd say this was pretty successful and the promotor told us they would like to host this again next year.

Binocular Telescope

The club received some good news on the repair of the binocular telescope donated by Maria Comninou. The binoculars were sent to Orion for service after an eyepiece jammed and could not be removed. Greg Knekleian has been working with Orion for the past few months on the issue. A few days ago, Greg received word that Orion has decided to replace the binoculars (They've changed the design slightly — Greg seems to have been given some indication that this was a known issue with that design.) The replacement should be on the way now (we have not received them yet.) This was handled at no cost to the club — other than shipping. Good news indeed and thanks go to Greg for handling the interaction with Orion to a successful outcome.

FAAC Equip Report 4/12/15

By Dennis Salliotte

<u>Item</u>	<u>Currently Held By:</u>	<u>Date Last Verified</u>
<u>Telescopes</u>		
4" Dobsonian (Harold's donation)	George Korody	1/22/15
<u>Presentation Tools</u>		
Projector (older)	Jim Frisbie	1/6/15
Projection Screen 8'	Bob MacFarland	1/11/15
Speaker System w/wireless mic	Bob MacFarland	1/11/15
Bullhorn	George Korody	1/22/15
DVD Player	Jim Frisbie	1/6/15
Projection Screen 6'	Mike Dolsen	4/12/15
Projector, ViewSonic	Mike Dolsen	4/6/15
<u>Demonstration Tools</u>		
Weight On Planets Scale	George Korody	1/22/15
Lunar Phase Kit	Bob MacFarland	1/11/15
100 ft Scale Model Solar System Kit	Bob MacFarland	1/11/15
<u>Display Items</u>		
Astronomy Event Sign (3' X 6')	Gordon Hansen	3/16/15
PVC Display Board - Folding	Tim Campbell	3/13/15
Banner – Small (24" X 32")	George Korody	1/22/15
Banner – Medium (24" X 72")	Tim Campbell	3/13/15
Banner – Large (32" X 16')	Dennis Salliotte	4/12/15
Tri-Fold Presentation Boards	Don Klaser	1/22/15
Tri-Fold Poster Board (Early Club Photos)	George Korody	1/22/15
<u>Other</u>		
Canopy (10' X 10')	Tim Campbell	4/2/15
Equipment Etching Tool	Gordon Hansen	4/2/15
Pop Cooler	Michael Dolsen	3/26/15
<u>EQUIPMENT KITS</u>		
<u>Telescopes</u>		
TK3 Celstrn 130 Newt Goto mount	Liam Finn	2/13/15
TK4 Clstrn 90 Refrctr w/man mount	Liam Finn	2/13/15
TK5 4 1/2 " Reflector, on Fitz GEM mount	George Korody	1/22/15
TK6 8" Orion 8XTi Dobsonian	Patrick Lawton	2/13/15
<u>Binoculars</u>		
BK3 15x70 binocs, monopod mount	Bob MacFarland	1/11/15
BK4 20x80 binocs, altaz goto mount	Sandra Macika	2/5/15
BK5 25x70 binocs w/tripod adaptor	Tim Dey	2/13/15

FAAC Equip Report 4/12/15

By Dennis Salliotte

<u>Eyepiece Kit</u>		
EPK1 Eyepieces, filters & accesories	Liam Finn	2/13/15
<u>Other</u>		
TA Sky Quality Meter	Syed Saifullah	2/14/15
TA Sky Atlas 2000.0	Tim Dey	2/13/15
TA Orion telescope binoviewer	Liam Finn	2/13/15
<u>Lincoln Park Observatory</u>		
LPO Celestron binoviewer #93691	Tim Dey	3/16/15
LPO Celestron 2X 1.25" Barlow	Tim Dey	3/16/15
<u>Imaging SIG</u>		
C1 Celestron NexImage Solar System Imager model #93712	Gordon Hansen	3/16/15
C2 Meade Deep Sky Imager PRO III w/AutoStar Suite	Gordon Hansen	3/16/15
C3 Orion StarShoot Deep Space Video Camera NTSC #52185 w/video capture device #52178	Gordon Hansen	3/16/15
C4 Meade Electronic Eyepiece w/cable to a video monitor, VCR or TV. Pairw#43 AND Meade 3.5" LCD Color Monitor Kit # 07700 Complete (unused). Pair w#34	Gordon Hansen	3/16/15
C5 Orion StarShoot Deep Space Video Camera II #52195 AND Orion StarShoot iPhone Control for Deep Space Video Camera II #52195	Gordon Hansen	3/16/15
CA1 Rigel Systems Spectroscope	Gordon Hansen	3/16/15
CA2 Celestron 1.25" to T-Adapter(male thread) Model #93625	Gordon Hansen	3/16/15
CA3 Canon EOS deluxe astrophoto kit FOR Canon bayonet T-thread adapter ans variable 1.25" extender	Gordon Hansen	3/16/15
CA4 Orion StarShoot LCD-DVR #58125 2.5" LCD screen	Gordon Hansen	3/16/15
CA5 Celestron Canon EOS T-ring adapter #93419	Gordon Hansen	3/16/15
<u>Special Event Use Only- Not Available For Loan Out</u>		
TK1 Coronado PST solar scope w/double stack, Meade Autostar Goto mount & tripod and accessories	John McGill	1/22/15
TK2 Meade 8" ETX-LS-ACF w/tripod, voice assist, computerized GPS plus MANY (35+) accessories	Tim Dey	2/13/15
BK1 Orion BT-100 binocular telescope w/hard case, Orion VersaGo h.d. man altaz mount w/Vixen dovetail head and Vixen style binocular holder bracket	Ken Anderson	1/11/15
BK2 Zhumell 25x100 binoculars, hard case & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika	2/5/15
TAK1 Night Vision Intensification binocular unit	George Korody	1/22/15
Dennis Salliotte equipment@fordastronomyclub.com		

FAAC General Meeting Minutes, March 26, 2015

By Ellen Duncan

FAAC vice president Tim Dey called the meeting to order at 5:30, then members introduced themselves. We had 2 guests who were friends of our guest speaker, Jeff McLeod.

Observing experiences: Milt saw conjunction of Mars and Uranus in binoculars March 11, also crescent moon and Venus. Jon saw many beautiful things from Hawaii, including the green flash. Tuesday night Dale observed Jupiter and the crescent moon with some new astronomers at Oakland University. Doug Bauer and did some observing and outreach in South Carolina. Syed got a new 5" telescope and had about four sessions with pretty good observing including Comet Lovejoy and many other objects.

Gordon presented "What's Up in April." Including Nova Sagittarii No. 2, moon phases, the Lyrid meteor shower, a lunar eclipse April 4 (not good viewing hereabouts), Jupiter, Jupiter's moons, Saturn, and 25 Messier objects.

Dennis gave the club equipment report. Syed reported that social media stuff is going well and asked that he would be happy to receive feedback. Please go to YouTube and subscribe to "Astronomy for Everyone."

Introduced by Dale, guest speaker Jeff MacLeod presented "GAIA Spacecraft: Mapping the Milky Way."

The treasurer's and secretary's reports can be found in Star Stuff on line. Gordon presented the final tally for this year's very successful Astronomy Conference in March.

Upcoming events:

April 24: outreach at Livonia Franklin High School

April 25: Astronomy Day! Daytime solar observing at Kensington Metropark Nature Center and the Michigan Science Center, and our first Beginners' Night of 2015 at the Lake Erie Metropark Nature Center.

May 2: Annual Club Banquet at Karl's Cabin in Canton.

The meeting was adjourned at approximately 7:30 pm.



2015 FAAC Dinner Banquet

Saturday, May 2, 2014
6 PM till 10 PM

After Dinner Talk

Robert Clubb: The Fun Side of H-R Diagrams

Plus

Astro Picture Presentation – Door Prizes – Astro Jeopardy

Location: Karl's Cabin

Dinner Selections:

- **New York Strip Steak - \$40.00** – Char-grilled 12 oz. cut cooked medium
- **Chicken Marsala - \$35.00** – Lightly floured & Sautéed with marsala wine sauce
- **Parmesan Encrusted Cod - \$35.00** – Cod, Parmesan & Herb Crumb Crust, Citrus Beurre Blanc
(Vegetarian Choice Available on Request)

Includes green beans, red skin potato, tossed garden salad with choice of two dressings, warm rolls and butter



Hot Fudge Sundae, Coffee, hot tea, and soft drinks included

\$\$Cash Bar\$\$

Cocktails at 6 PM – Dinner at 7 PM

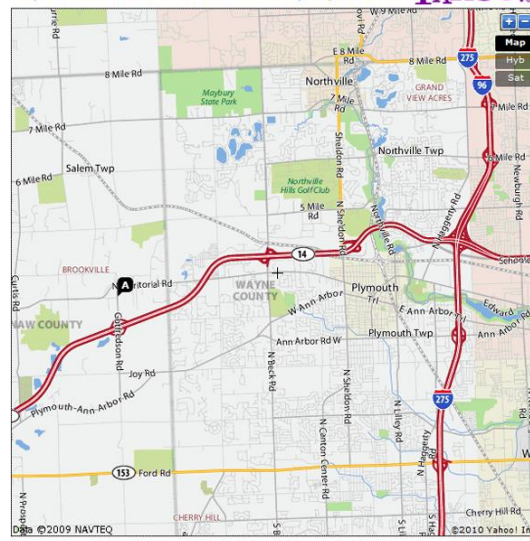
Reservations:

Gordon Hansen at treasurer@fordastronomyclub.com

or post a note on the Yahoo Group

Karl's Cabin is located at:
6005 Gotfredson Road
Plymouth, MI 48170
Phone 734-455-8450

Map of Karls Cabin Restaurant & Bar (734) 455-8450 **YAHOO!**



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