



# Star Stuff

## Ford Amateur Astronomy Club Newsletter

Volume 27, Number 4

April 2017

### NOAA's Joint Polar Satellite System (JPSS) to monitor Earth as never before

By Ethan Siegel

Later this year, an ambitious new Earth-monitoring satellite will launch into a polar orbit around our planet. The new satellite—called JPSS-1—is a collaboration between NASA and NOAA. It is part of a mission called the Joint Polar Satellite System, or JPSS.

At a destination altitude of only 824 km, it will complete an orbit around Earth in just 101 minutes, collecting extraordinarily high-resolution imagery of our surface, oceans and atmosphere. It will obtain full-planet coverage every 12 hours using five separate, independent instruments. This approach enables near-continuous monitoring of a huge variety of weather and climate phenomena.

JPSS-1 will improve the prediction of severe weather events and will help advance early warning systems. It will also be indispensable for long-term climate monitoring, as it will track global rainfall, drought conditions and ocean properties.

The five independent instruments on board are the main assets of this mission:

- The Cross-track Infrared Sounder (CrIS) will detail the atmosphere's 3D structure, measuring water vapor and temperature in over 1,000 infrared spectral channels. It will enable accurate weather forecasting up to seven days in advance of any major weather events.
- The Advanced Technology Microwave Sounder (ATMS) adds 22 microwave channels to CrIS's measurements, improving temperature and moisture readings.

### Presidents Article

By Liam Finn

#### *Annual Banquet*

May is a strange month that does not provide a suitable moon for a Beginners night but does bring us together for our Annual Banquet, which will be held on Saturday May 20<sup>th</sup> in Karl's Cabin in Plymouth. This yearly event not only allows us to see each other's faces (as we see none in the dark when observing) but also brings us together for some fun and socialization. As we do every year we meet at 6PM for cocktails, start dinner at 7PM. This year's speaker is Greg Burnett who was one if not the first founding member of our club 25 years ago. Greg has agreed to honor us by attending and giving a talk on "A Retrospective on the Early Days and the Passage of Time".

It is also the time of year where we pay homage to the hard work of one of our members who has gone above and beyond his call of duty to the club by awarding the selected person our highest honor "The Sirius Award". This award is a one in a lifetime award and those who receive it are the most dedicated and hardworking members of our club.

Once the serious side of the evening is over then we get silly. Astro Jeopardy is where we show our knowledge of astronomy, make fun of the other teams and try to answer without using Google, which almost always fails at one point or another.

What kind of Banquet would it be without Door Prizes? George and Pat Korody work tirelessly to gather astronomy related prizes and no one leaves empty handed. You need to attend to win so make sure you reserve your place now.

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## Presidents Article

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Reservations can be made by contacting our treasurer Mike Bruno at [treasurer@fordastronomyclub.com](mailto:treasurer@fordastronomyclub.com).

The Menu is below:

- Filet Mignon – \$45.00 – 8oz. grilled center cut
- Chicken Marsala – \$30.00 – Natural chicken breast medallions with marsala wine sauce
- Scottish Salmon – \$35.00 – Scottish Salmon topped with white wine, lemon & caper
- Vegetarian – \$30.00 – Butternut Squash Ravioli
- Includes green beans, red skin potato, and tossed garden salad with choice of two dressings, warm rolls and butter.

Coffee, hot tea, and soft drinks included. Dinner payments can be made by check prior to the event or at the event by cash, check or credit card, Please add a 3% Credit Card processing fee if paying by card.

### *Beginners Nights*

Our First beginners' night of the year was April 1<sup>st</sup> and it was an amazing success. We had between 15 and 18 astronomers attend. I don't think I have ever seen a Beginners Night with so many scopes. I think this is an amazing show of activity from our membership and I would like to see it repeated.

Our next Beginners Night is April 29<sup>th</sup> and again it will be at Spring Mill Pond in Island Lake State Recreational Area. April 29<sup>th</sup> is also International Astronomy Day. I once again call on our members to come out in force and show how active our members are and how joining our club will not only bring knowledge of Astronomy but also bring them into a close fun group they can be proud to say they are part of.

May is an unusual month where we don't have a Beginners Night as there is no 1<sup>st</sup> Quarter Moon that falls at a good time so we resume our Beginner Nights on June 3<sup>rd</sup>.

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## NOAA's Joint Polar Satellite System (JPSS) to monitor Earth as never before

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- Taking visible and infrared images of Earth's surface at 750 meter resolution, the Visible Infrared Imaging Radiometer Suite (VIIRS) instrument will enable monitoring of weather patterns, fires, sea temperatures, light pollution, and ocean color observations at unprecedented resolutions.
- The Ozone Mapping and Profiler Suite (OMPS) will measure how ozone concentration varies with altitude and in time over every location on Earth's surface. This can help us understand how UV light penetrates the various layers of Earth's atmosphere.
- The Clouds and the Earth's Radiant System (CERES) instrument will quantify the effect of clouds on Earth's energy balance, measuring solar reflectance and Earth's radiance. It will greatly reduce one of the largest sources of uncertainty in climate modeling.

The information from this satellite will be important for emergency responders, airline pilots, cargo ships, farmers and coastal residents, and many others. Long and short term weather monitoring will be greatly enhanced by JPSS-1 and the rest of the upcoming satellites in the JPSS system.



*Caption: Ball and Raytheon technicians integrate the VIIRS Optical and Electrical Modules onto the JPSS-1 spacecraft in 2015. The spacecraft will be ready for launch later this year. Image Credit: Ball Aerospace & Technologies Corp.*

## Presidents Article

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### *State Wide Astronomy Night (SWAN) Follow-up*

As mentioned in last month's StarStuff, the FAAC in conjunction with Henry Ford College (HFC) held a SWAN event at HFC on Friday April 7<sup>th</sup>. The event was a resounding success. Over the 3 hours in HFC and the observing at UMD we estimate we had 130 members of the public attend. I would like to thank the following who made the event a success: Steve Murrell for HFC for hosting the event. Tim Campbell, Hayden Barret, Robert Club, Rich, Sandra and John McGill. If I missed anyone I'm sorry but all who helped--I thank you!

### *Michigan Science Center*

Michigan Science Center has asked for our club members to participate in one final event they are running in April. On April 29th they would love to have some members to come out with solar scopes to do some solar observing (weather permitting of course) with the public from 10AM to 6PM.

## Secretary's Report

By Jessica Edwards

### *March 23<sup>rd</sup> Club Meeting*

#### *Member Observations and What's up*

The sun was quiet when observed with the club's PST in Florida. Several members observed the occultation of Jupiter by the Moon. Comet 41P continues to be in the North East at dusk. The Leo Triplet and M105 are good targets so search out at this time of year.

### *Main Talk – Ohio Archeoastronomy – Joann Ballbach*

The native peoples of Ohio left behind many artifacts. Many of which are standard things people used at the time – spear points, pottery, and art. More intriguing are the large structures they erected whose purpose has been a matter of speculation for modern anthropologists. From about 13000 BCE to 8000 BCE, the people mostly kept to themselves. Trade was limited and resources went into survival. After this time, many large mound structures were built. Some of these mounds were burial places for important people while others were shaped as animals including possums, panthers, and serpents. Other mounds enclosed areas that were ceremonial in nature. These mounds included gaps for the sunrise on the summer solstice and large wooden posts that indicated the sunrise for the winter solstice. When other lines are drawn at these sites, they line up with the movements of the Moon but it is hard to know their exact significance. These sites were the hub of major trade in Ohio as copper and iron from the Upper Peninsula of Michigan have been found along with other materials from the region.

### *Plymouth Astro Imaging SIG Events*

By Gordon Hansen

All are welcome to attend. The meetings are at the Plymouth Library at 6 pm on the third Tuesday of each month. Reminders are published on the club's Yahoo Group.

## 2017 Beginner's Nights Calendar

Month	1st Quarter	Beginner's Night	Sunset	Location
April	Monday, April 3rd	<b>Saturday, April 1st</b>	7:58pm	Island Lake
April/May	Tuesday, May 2nd	<b>Saturday, April 29th</b>	8:30pm	Island Lake
		<b>^^Int'l Astronomy Day^^</b>		
June	Thursday, June 1st	<b>Saturday, June 3rd</b>	9:04pm	Island Lake
July	Friday, June 30th	<b>Saturday, July 1st</b>	9:12pm	Island Lake
July II	Sunday, July 30th	<b>Saturday, July 22th</b>	8:54pm	Island Lake (Club Picnic)
August	Tuesday, August 29th	<b>Saturday, August 26th</b>	8:15pm	Island Lake
<b>**Solar Eclipse is on 21st** - Head for totality!</b>				
September	Friday, September 9th	<b>Fri-Sat Sept 29, 30</b>	7:17pm 7:14pm	(AATB / Island Lake)
October	Sunday, October 27th	<b>Saturday, October 28th</b>	6:30pm	Maybury State Park

# Treasurers Report

March 2017

By Mike Bruno

<b>Ford Amateur Astronomy Club</b>	
<b>Balance Sheet</b>	
<b>4/23/2017</b>	
<b>ASSETS</b>	
<b>Checking / Savings</b>	
<u>Checking</u>	\$ 837.20
<b>FAAC Savings</b>	
<i>General</i>	3,081.00
<i>Equipment</i>	2,342.87
<i>Scholarship</i>	417.26
<b>Total FAAC Savings</b>	5,841.13
<b>Petty Cash</b>	204.00
<b>Total CD's</b>	3,191.57
<b>Total Checking / Savings</b>	10,073.90
<b>TOTAL ASSETS</b>	<u>\$ 10,073.90</u>
<b>TOTAL EQUITY</b>	<u>\$ 10,073.90</u>
<b>INCOME</b>	
Membership Dues	\$ 1,315.00
Equipment Fund	41.00
Scholarship Fund	75.00
Merchandise	167.00
Club Events	1,141.50
Miscellaneous	100.00
Interest	3.25
<b>Total Income</b>	2,842.75
<b>EXPENSES</b>	
Merchandise	193.05
Club Events	684.04
Office expense	35.58
<b>Total Expenses</b>	912.67
<b>NET INCOME</b>	<u>\$ 1,930.08</u>

## FAAC Equipment Holders Report

By Dennis Salliotte

### FAAC Equipment Report 4/20/17

<u>Item</u>	<u>Currently Held By:</u>	<u>Date Last Verified</u>
<b><u>Telescopes</u></b>		
4" Dobsonian (Harold's donation)	George Korody	1/20/17
<b><u>Presentation Tools</u></b>		
Projector (older)	Jim Frisbie	1/15/17
Projection Screen 8'	Bob MacFarland	3 /15/17
Speaker System w/wireless mic	Bob MacFarland	3/15/17
Bullhorn	George Korody	1/20/17
DVD Player	Jim Frisbie	1/15/17
Projection Screen 6'	Mike Dolsen	1/15/17
Projector, ViewSonic	Gordon Hansen	1/16/17
<b><u>Demonstration Tools</u></b>		
Weight On Planets Scale	George Korody	1/20/17
Lunar Phase Kit	Bob MacFarland	3/15/17
100 ft Scale Model Solar System Kit	Bob MacFarland	3/15/17
<b><u>Display Items</u></b>		
Astronomy Event Sign (3' X 6')	Gordon Hansen	1/16/17
PVC Display Board - Folding	Sandra Macika	1/23/17
Banner – Small (24" X 32")	George Korody	1/20/17
Banner – Medium (24" X 72")	Sandra Macika	1/23/17
Banner – Large (32" X 16')	George Korody	1/20/17
Tri-Fold Presentation Boards	Don Klaser	1/26/17
Tri-Fold Poster Board (Early Club Photos)	George Korody	1/20/17
<b><u>Other</u></b>		
Canopy (10' X 10')	Dennis Salliotte	4/20/17
Equipment Etching Tool	Greg Ozimek	1/20/17
Pop Cooler	Dennis Salliotte	4/20/17
<b><u>EQUIPMENT KITS</u></b>		
<b><u>CARETAKER</u></b>		
<b><u>Telescopes</u></b>		
TK3 Celstrn 130 Newt Goto mount	Liam Finn	3/15/17

TK4 Clstrn 90 Refrctr w/man mount	Liam Finn	3/15/17
TK5 4 ½ “ Reflector, on Fitz GEM mount	Bob MacFarland	3/15/17
TK6 8” Orion 8XTi Dobsonian	Jed Datema CARETAKERSHIP IS AVAILABLE	3/29/17
TK1 Coronado PST solar scope w/double stack, Meade Autostar Goto mount & tripod and accessories	John McGill	1/15/17
TK7 TPO 8” f/4 Imaging Newtonian Telescope (OTA)	Jim Barnes	1/16/17
<b><u>Binoculars</u></b>		
BK3 15x70 binocs, monopod mount	Bob MacFarland	2/19/17
BK4 20x80 binocs,altaz goto mount	Sandra Macika	1/23/17
BK5 25x70 binocs w/tripod adaptor	Tim Dey	1/16/17
<b><u>Eye-piece Kit</u></b>		
EPK1 Eyepieces, filters & accesories	Liam Finn	3/15/17
<b><u>Other</u></b>		
TA Sky Quality Meter	Syed Saifullah	1/18/17
TA Sky Atlas 2000.0	Tim Dey	1/16/17
TA Orion telescope binoviewer	Liam Finn	3/15/17
<b><u>Lincoln Park Observatory</u></b>		
LPO Celestron binoviewer #93691	Tim Dey	1/16/17
LPO Celestron 2X 1.25” Barlow	Tim Dey	1/16/17
<b><u>Imaging SIG</u></b>		
C1 Celestron NexImage Solar System Imager model #93712	Gordon Hansen	1/16/17
C2 Meade Deep Sky Imager PRO III w/AutoStar Suite	Gordon Hansen	1/16/17
C3 Orion StarShoot Deep Space Video Camera NTSC #52185 w/video capture device #52178	Gordon Hansen	1/16/17
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	1/16/17

C5 Orion StarShoot Deep Space Video Camera II #52195 AND Orion StarShoot iPhone Control for Deep Space Video Camera II #52195	Gordon Hansen	1/16/17
C6 Canon 60 DA and accessories	Tim Dey	1/16/17
CA1 Rigel Systems Spectroscope	Gordon Hansen	1/16/17
CA2 Celestron 1.25" to T-Adapter(male thread) Model #93625	Gordon Hansen	1/16/17
CA3 Canon EOS deluxe astrophoto kit FOR Canon bayonet T-thread adapter and variable 1.25" extender	Gordon Hansen	1/16/17
CA4 Orion StarShoot LCD-DVR #58125 2.5" LCD screen	Gordon Hansen	1/16/17
CA5 Celestron Canon EOS T-ring adapter #93419	Gordon Hansen	1/16/17
<b><u>Special Event Use Only- Not Available For Loan Out</u></b>		
TK2 Meade 8" ETX-LS-ACF w/tripod, voice assist, computerized GPS plus MANY (35+) accessories	Tim Dey	1/16/17
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	3/15/17
BK2 Zhumell 25x100 binoculars, hard case & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika	1/23/17
TAK1 Night Vision Intensification binocular unit	George Korody	1/20/17
Dennis Salliotte equipment@fordastronomyclub.com		



## STAR STUFF

This Newsletter is published eleven times each year by:

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

PRESIDENT: Liam Finn

VICE PRESIDENT: Tim Dey

SECRETARY: Jessica Edwards

TREASURER: Mike Bruno

WEBMASTER: Greg Ozimek

NEWSLETTER EDITOR: Syed Saifullah

### 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](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 of 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. You may also 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: [StarStuff@fordastronomyclub.com](mailto: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 month's issue.

\* FAAC Members are welcome to join our Ford Astronomy Club Yahoo! Group. Messages photos, files, online discussions.