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The Closest New Stars To Earth

By Ethan Siegel

When you think about the new stars forming in the Milky Way, you probably think of the giant star-forming regions like the Orion Nebula, containing thousands of new stars with light so bright it's visible to the naked eye. At over 400 parsecs (1,300 light years) distant, it's one of the most spectacular sights in the night sky, and the vast majority of the light from galaxies originates from nebulae like this one. But its great luminosity and relative proximity makes it easy to overlook the fact that there are a slew of much closer star-forming regions than the Orion Nebula; they're just much, much fainter.

If you get a collapsing molecular cloud many hundreds of thousands (or more) times the mass of our sun, you'll get a nebula like Orion.

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President's Article

By Tim Campbell

Thank You... and Help Wanted

The club's list of functions and outreach events that we host each year is amazing. These events are all organized and run by volunteers. The list is long and impressive and I do my best to acknowledge and recognize our volunteers.

Conference & Swap Meet: Each year we host conference & swap meet. These events have traditionally been organized by Jim Frisbie and Frank Ancona. Jim and Frank would like to take a step back and encourage others to continue this annual effort. This year Gordon is leading the effort to organize and run the event. There are many more people involved... tickets, food, speakers, tables, sponsors, and advertising are all needed to pull off this significant fund-raising event for the club. Each year the event brings in enough funds to keep our annual dues low.

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STAR STUFF

Jan/Feb 2016 - Vol. 26 No 1

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: Jessica Edwards
TREASURER: Gordon Hansen
WEBMASTER: Greg Ozimek
NEWSLETTER EDITOR: Liam Finn

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 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.

This month's 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/>

Here's a "Help Wanted" angle... Gordon is looking for speakers for this event. Past speakers have done talks on equipment maintenance, repairs, imaging techniques and other topics. If you're passionate about some aspect of astronomy, odds are you'd be able to share that passion in a session. Contact Gordon and offer to give a presentation (treasurer@fordastronomyclub.com will forward to Gordon.)

Astronomy at the Beach:

Each fall, the area clubs all host the Astronomy at the Beach outreach event at Kensington Metropark as part of the Great Lakes Association of Astronomy Clubs (GLAAC). The weekend typically has more than 4,000 visitors. A number of volunteers from the club serve on the GLAAC committee to organize the event. This year, George Korody, Sandra Macika, Liam Finn, Bob Clubb, Mike Dolsen, and Dennis Salliotte have been attending meetings to help with the organization efforts previously handled by Bob MacFarland, George Korody, John Schroer, and Bob FitzGerald (most of you are aware that we lost John and Bob in 2014). George Korody, however, has traditionally been our club's table-captain to organize the club table at the event.

Here's the "Help Wanted" angle... George would like to step back from the table-captain role and we're looking for a club member to take-over. The table-captain manages all the items we display on the table (brings them to the event and takes them home) and also sends around the sign-up list to encourage volunteers to staff the table for short periods of time (so no one person is at the table continuously.)

Annual Club Banquet:

At the club's annual banquet each year, attendees receive door prizes which are, in some way, related to astronomy... no matter how tangentially. The door prizes are meant to be fun. Pat Korody keeps a keen-eye open throughout the entire year for possible door-prize give-away items. Pat would like to hand this role over to a successor to begin hunting for next year's prizes.

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The Closest New Stars To Earth

(continued from Page 1)

But if your cloud is only a few thousand times the sun's mass, it's going to be much fainter. In most instances, the clumps of matter within will grow slowly, the neutral matter will block more light than it reflects or emits, and only a tiny fraction of the stars that form—the most massive, brightest ones—will be visible at all. Between just 400 and 500 light years away are the closest such regions to Earth: the molecular clouds in the constellations of Chamaeleon and Corona Australis. Along with the Lupus molecular clouds (about 600 light years distant), these dark, light-blocking patches are virtually unknown to most sky watchers in the northern hemisphere, as they're all southern hemisphere objects.

In visible light, these clouds appear predominantly as dark patches, obscuring and reddening the light of background stars. In the infrared, though, the gas glows brilliantly as it forms new stars inside. Combined near-infrared and visible light observations, such as those taken by the Hubble Space Telescope, can reveal the structure of the clouds as well as the young stars inside. In the Chameleon cloud, for

example, there are between 200 and 300 new stars, including over 100 X-ray sources (between the Chamaeleon I and II clouds), approximately 50 T-Tauri stars and just a couple of massive, B-class stars. There's a third dark, molecular cloud (Chamaeleon III) that has not yet formed any stars at all.

While the majority of new stars form in large molecular clouds, the closest new stars form in much smaller, more abundant ones. As we reach out to the most distant quasars and galaxies in the universe, remember that there are still star-forming mysteries to be solved right here in our own backyard.

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 16, 2016

By Gordon Hansen

Ford Amateur Astronomy Club Balance Sheet As of February 16, 2016

	Feb 16, 16
ASSETS	
Current Assets	
Checking/Savings	
10000 · Checking	228.72
11000 · FAAC Savings	
11100 · FAAC Club Savings	2,105.65
11200 · Equipment	2,253.70
11300 · Scholarship	361.26
11400 · GLAAC	6,355.13
Total 11000 · FAAC Savings	11,075.74
12000 · Petty Cash Account	18.77
13000 · CD's	
13100 · CD 200599272	1,063.24
13200 · CD 205196033	1,007.86
13300 · CD 89265268	1,111.86
Total 13000 · CD's	3,182.96
Total Checking/Savings	14,506.19
Total Current Assets	14,506.19
TOTAL ASSETS	14,506.19
LIABILITIES & EQUITY	
Equity	
30000 · Opening Balance Equity	8,890.38
32000 · Retained Earnings	5,573.02
Net Income	42.79
Total Equity	14,506.19
TOTAL LIABILITIES & EQUITY	14,506.19

President's Article

(continued from Page 2)

Club Officers:

Annually, we elect four club officers for one-year terms. Officer positions are term-limited serving a maximum of three years in the same position. This means that as of this year, both myself as club president and Gordon Hansen as club treasurer are both term-limited. Near the end of this year, it will be my responsibility to appoint a nomination committee to search for members willing to run for the officer vacancies. An easier and, I think, more effective transition would be to identify candidates much earlier in the year who would participate in board meetings to gain a better understanding of the club operations. The "Help Wanted" angle is, of course, to solicit members willing to offer their services as club officers who can attend board meetings to become familiar with our monthly activities.

Star Stuff Newsletter:

Since 2011 Jennifer Monske has been our newsletter editor and five years worth of newsletters were published by Jennifer. Liam Finn has offered to take on the newsletter editor role, but Liam will need your help. Look for requests for article submissions to the monthly newsletter. Consider writing and submitting articles about your observations, outreach events, techniques, equipment or software reviews, maintenance, or any number of other astronomy topics.

For all of those who have volunteered their hours of passion and expertise, on behalf of the club, I say Thank You! In this article, I've mentioned several people who've volunteered their time and talent.

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President's Article

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There are so many other volunteer activities that I haven't mentioned... such as club outreach events, the club picnic, the HFC planetarium, the Lincoln Park Observatory, the website, the astrophotography SIG, food and beverages at the monthly meetings, membership administration and renewals, monthly club speaker scheduling, equipment management and more. And of course... there is a very large number of people who participate in the numerous club outreach events we perform each year.

Thank You for your service to your club and to your community.

There are numerous volunteer opportunities throughout the year, but I've also named a few special roles where we are currently seeking specific help.

Interested in volunteering? Drop me a note at president@fordastronomyclub.com.

Membership Dues

By Tim Campbell

Club Membership Dues

Most of us have annual memberships and renew our membership dues at the end of each calendar year. If you've recently joined the club in (or after) September of the year then your membership probably doesn't expire until the end of next year (2016).

But for the rest of us (myself included), it's time to renew our membership dues.

Initial membership is \$30, but renewal is only \$25 provided that you renew before the end of January (after that it goes back to \$30).

You can renew by bringing either cash or check to Gordon Hansen (club treasurer) at the December or January club meeting. You can also mail a check the club's PO Box.

Ford Amateur Astronomy Club

P.O. Box 7527

Dearborn, MI 48121-7527

Thanks to the tireless work of numerous club volunteers, the club keeps our expenses incredibly low and the entire operating budget for the club is derived primarily by our low annual membership dues and the proceeds from the club's springtime Astronomy Conference & Swap event (traditionally that's in March of each year.) These volunteers make it possible to keep our annual membership dues as low as they are.

For the Young Astronomers

A Jacket for the planet

A Jacket for the planet

Earth is a great planet to live on because it has a wonderful atmosphere around it. This jacket of gases does a lot for us. It keeps us warm, it gives us oxygen to breathe, and it's where our weather happens.

The atmosphere surrounds our planet like the peel of an orange. But it's not the same everywhere. It has different layers with different qualities.

One atmosphere many layers

Earth's atmosphere has six different layers. They go from the ground all the way to outer space

The layer we call home

Closest to the surface of Earth, we have the troposphere. "Tropos" means change. This layer gets its name from the weather that is constantly changing and mixing up the gases in this part of our atmosphere.

The troposphere is between 5 and 9 miles (8 and 14 kilometers) thick depending on where you are on Earth. It's thinnest at the North and South Pole.

This layer has the air we breathe and the clouds in the sky. The air is densest in this lowest layer. In fact, the troposphere contains three-quarters of the mass of the entire atmosphere. The air here is 78% nitrogen and 21% oxygen. The last 1% is made of argon, water vapor, and carbon dioxide.

When you feel the wind on your face, see clouds in the sky, and watch a bird flap its wings in flight, you're experiencing the troposphere. It's a pretty nice layer to call home.

A Layer made of layers

Above the troposphere and below the mesosphere, we have the stratosphere. "Strat" means layer. This layer of our atmosphere has its own set of layers. There are no storms or turbulence here to mix up the air, so cold, heavy air is at the bottom and warm, light air is at the top. That's the opposite of how the layers work in the troposphere, where we live. If you were to climb a mountain in the stratosphere you would have to take off your warm clothes as you got closer to the top rather than putting them on like we usually do. But there are no mountains high enough to reach the stratosphere, so you don't have to worry about that.

This layer is 22 miles (35 kilometers) thick. The stratosphere is where you'll find the very important ozone layer. The ozone layer helps protect us from ultraviolet radiation (UV) from the sun. In fact, the ozone layer absorbs most of the UV radiation the sun sends to us. Life as we know it wouldn't be possible without this layer of protection.

The Middle Layer

The mesosphere lies between the thermosphere and the stratosphere. "Meso" means middle, and this is the highest layer of the atmosphere in which the gases are all mixed up rather than being layered by their mass.

The mesosphere is 22 miles (35 kilometers) thick. The air is still thin, so you wouldn't be able to breathe up in the mesosphere. But there is more gas in this layer than there is out in the thermosphere.

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For the Young Astronomers

A Jacket for the planet

(continued from Page 6)

Have you ever seen a meteor shower, where meteors burn up and streak across the sky? Some people call them shooting stars. Those meteors are burning up in the mesosphere. The meteors make it through the exosphere and thermosphere without much trouble because those layers don't have much air. But when they hit the mesosphere, there are enough gases to cause friction and create heat.

The heat that won't keep you warm

The thermosphere lies between the exosphere and the mesosphere. "Thermo" means heat, and the temperature in this layer can reach up to 4,500 degrees Fahrenheit. If you were to hang out in the thermosphere, though, you would be very cold because there aren't enough gas molecules to transfer the heat to you. This also means there aren't enough molecules for sound waves to travel through.

This layer of Earth's atmosphere is about 319 miles (513 kilometers) thick. That's much thicker than the inner layers of the atmosphere, but not nearly as thick as the exosphere.

The thermosphere is home to the International Space Station as it orbits Earth. This is also where you'll find low Earth orbit satellites. There's a lot going on in the thermosphere!

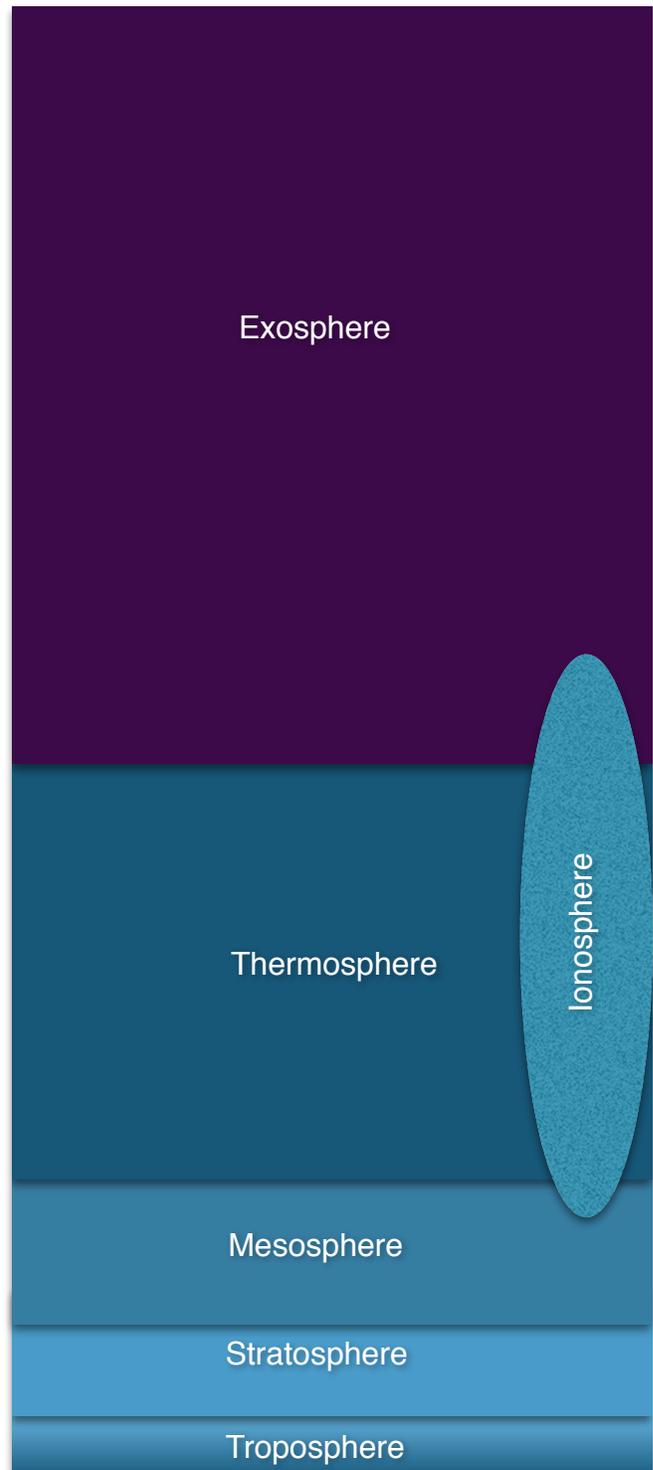
The outermost layer

The exosphere is the outermost layer of our atmosphere. "Exo" means outside and is the same prefix used to describe insects like grasshoppers that have a hard shell or "exoskeleton" on the outside of their body.

The exosphere is the very edge of our atmosphere. This layer separates the rest of the atmosphere from outer space. It's about 6,200 miles (10,000 kilometers) thick. That's almost as wide as Earth itself. The exosphere

is really, really big. That means that to get to outer space, you have to be really far from Earth.

The exosphere has gases like hydrogen and helium, but they are very spread out. There is a lot of empty space in between. There is no air to breathe, and it's very cold



Observing in Maui

By Tim Cambell

This past January, Leon and I were graciously invited to spend a week with Jon & Rosie Blum in Maui. Normally when I take a vacation, my friends aren't so interested in astronomy (well... they are, but they're not interested in the part that includes going to a remote location with low light pollution and staying out all night.) So when I received an invitation from a fellow amateur astronomer to do some viewing from an excellent dark-sky location... of course I jumped at the chance.

On our first night in town, Jon and Rosie picked us up from the airport and we started the drive back to their condominium — stopping for food along the way. By the time we arrived at the restaurant, it was already well after sunset. As soon as I stepped out of the car I was amazed by the sky. I could see far more stars than are possible even at our club observing sites (intended to be away from the worst of the light pollution) and yet I was standing in a restaurant parking lot with all the lights on. If this is how good it is even when we're not trying to get away from the city lights, I could hardly wait to see what a "dark sky" site would offer.

I wouldn't have to wait long. I arrived near the new moon so Jon planned the trip up to the top of Haleakala for the following day so we would enjoy the views on a moonless night.

It takes a few hours to reach the top of the summit and Jon wanted to make sure we arrived while it was still daytime as there are several sightseeing stops worthy of seeing before nightfall.

The road up the mountain is (so I'm told) the best maintained road in Hawaii. The summit has a number of observatories, some of which are used by the military, so they make sure the access roads are in great shape. There are more than just government observatories at the summit, but meanwhile over on the Big Island of Hawaii, the observatories on Mauna Kea are mostly owned

by universities which are always short on funds... that road is dirt and you can't access the summit without a 4WD vehicle.

As we ascended Haleakala (pronounced "holly ah ka la" — Jon & Rosie tell me that "Hale" is Hawaiian for house and "La" is the name of the Sun. So the name in Hawaiian means "House of the Sun") you will encounter many switch-backs. What you won't encounter... are guard rails. Veer just slightly off the road and you'll find yourself on the express route down to the bottom of the mountain. There are many steep sections where I'm pretty sure we wouldn't survive the first drop, so I'd be lying if I pretended that the road up didn't make me at least a little bit nervous.

Temperatures drop by 3.6° per 1000' of altitude. So while it may be 80° at sea level, the Haleakala summit is 10,023' so that puts the temperatures down into the 40's. Wait for nightfall when the temps typically drop a bit, and it can get even colder. Also, at the summit it's often windy... very windy. So all those winter clothes you had to wear just to get to the airport in Michigan winter will actually come in quite handy now that you want to go up the mountain.

While we are prepared for the cold conditions at the summit, this day turns out to be a rather balmy 58° at the top and the wind is completely calm. After nightfall, it gets a bit colder, but not by much and the wind still remains calm. I couldn't have had better conditions if I had ordered them off a menu.

After we arrived at the summit, we checked out several of the views from the top including the Haleakala caldera. The views are impressive. The tourist areas are all within the Haleakala National Park (Tip: If you are 62 or older, you can get a "Senior Pass" which is a one time \$10 cost and valid for life.) But what we're really interested in doing is over in Science City.

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Observing in Maui

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Science City is the area at the summit occupied by numerous observatories. The area is closed to the public. But since Jon and Rosie are members of the Haleakala Amateur Astronomy Club, Jon has access and can bring guests.

There was no practical way to travel with any of my telescopes, so I chose to pack (a) binoculars, (b) camera and lenses, (c) camera tripod, and (d) a Losmandy StarLapse sky tracker. This would allow me to take long-exposure images of the night sky. I did bring binoculars since they don't occupy too much space in the baggage.

The club observing site has a concrete pad with a number of piers installed. Members can bring their own scopes and attach them to one of the piers.

They have a warm-up room, kitchen, and bathroom. Humorously, the mirror installed over the bathroom sink is actually a hexagonal



mirror cell from a giant telescope that previously occupied the summit.
Tim Campbell, Jon Blum, & Leon Shaner in Science City at the Haleakala Summit, Maui

Once the Sun sets (a gorgeous view from the summit since we are above the clouds and we watch the sun set into the clouds) we immediately notice that the sky is getting dark *except* in the west. We've got this roughly

triangular shaped patch of light reaching up from the west. This is the "Zodiacal Light". It's natural light pollution only visible from the darkest of skies. This is dust in the plane of the solar system being illuminated by the Sun. Jon tells me it will be a couple of hours before the Zodiacal light eventually disappears. Meanwhile, I've made my camera ready for some astrophotography.

Did I mention the skies were dark? I knew I would love this place as soon as I took a peek at the first image out of the camera. Ordinarily in local skies, I'd have a lot of background light pollution that would need to be worked out of the image and tease out the detail.

This literally is how the image came out of the camera (this is an unprocessed image.) In the newsletter this won't have much detail, but I'm mostly sharing this to show how much background light pollution you *don't* see — again, this is without any processing. This is, of course, the lower portion of Orion — rotated on it's side but you can see the three "belt" stars on the left and the M42 on the



right. I repeated several more captures but at various exposure times in hopes that the combined image will show a lot of detail. It's not done, but seems to be showing promise.

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For the Young Astronomers

A Jacket for the planet

(continued from Page 9)

This is, of course, the lower portion of Orion — rotated on it's side but you can see the three "belt" stars on the left and the M42 on the right. I repeated several more captures but at various exposure times in hopes that the combined image will show a lot of detail. It's not done, but seems to be showing promise.

If we thought the drive "up" was thrilling... wait until it's time to go back "down." I sort of forgot about the part where professional observatories forbid any outside lighting on the mountain. We can't turn on car headlights until we're outside of Science City. The club members warned us to "watch out for the black cows on the way down." I thought they were kidding... it turns out part of the road crosses open-range and while you never see a cow on the road on the way "up", the cows like to hang out on the roads after dark and can be quite the surprise as your drive "down" in the dark.

Spoiler alert: We do survive the trip down the mountain!

All in all it was an amazing trip. Jon & Rosie continued to spoil us with the best dark skies I've ever seen as well as taking us to all of the best places on Maui. I'll certainly never forget the experience and highly recommend it should you ever get such an opportunity

Ford Amateur Astronomy Club Event

Locations are:

LEMP = Lake Erie Metropark
 IL = Island Lake State Recreation Area (Spring Mill Pond)
 KMP = Kensington Metropark (Maple Beach)

MSU is promoting a state-wide astronomy night (SWAN) for April 15th (the friday before our normal club beginner's night at the Michigan Science Center.

A link to the event is below

<http://sciencefestival.msu.edu/about/2016-festival-highlights/statewide-astronomy-night-swan>

Month	Event	Date	Start Time	Location
March	Conference & Swap Meet	Saturday 19th	9:00am	Holy Cross Lutheran Church
April	Beginner Night	Saturday, 16th	8:00pm	LEMP
May	Beginner Night	Saturday, 14th Int'l Astronomy Day	8:00pm	IL
May	Annual Club Banquet	Saturday 21st	6:00pm	Karl's Cabin
June	Beginner Night	Saturday, 11th	8:00pm	IL
July	Beginner Night	Saturday, 9th	8:00pm	IL
August	Club Picnic	Saturday, 13th	8:00pm	IL (Club Picnic)
September	Astronomy At The Beach	Saturday, 10th	6:00pm	KMP
October	Beginner Night	Saturday, 8th	8:00pm	LEMP

Astro Imaging SIG Events

By 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 **10th**. The meeting room location – HFCC Admin. Services and Conference Center (same building), Berry Amphitheater Auditorium.

Topics invited. Pizza served.

March 10th - HFC 5:30pm

April 14th - HFC 5:30pm

May 12th - HFC 5:30pm

June 9th - HFC 5:30pm

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.

Classifieds

Dobstuff Telescope For-Sale

With a 16 inch -- 1.5 inch thick -- F4.5 mirror from a Meade Equatorial Starfinder Built in September 2011

6 point all aluminum mirror cell
2-speed 2-inch Moonlite Focuser
Destiny curved 3 vane Spider
3.1 inch Coulter Secondary

This is a Push-To Telescope with Homemade Digital Setting Circles (DSC) using a Tungsten T3 Palm Pilot. Paperwork, history of mirror, sketches, drawings, etc. All in a 3-ring binder..

Have over \$2100 invested...Selling for \$1875

Rick Arzadon – N8XI
6056 Hipp
Taylor, MI 48180
email: n8xi@juno.com
Telephone: 313-561-4839



FAAC Equip Report 11/20/15

By Dennis Salliotte

Item	Currently Held By:	Date Last Verified
<u>Telescopes</u>		
4" Dobsonian (Harold's donation)	George Korody	1/7/16
<u>Presentation Tools</u>		
Projector (older)	Gordon Hansen	2/16/16
Projection Screen 8'	Bob MacFarland	1/8/16
Speaker System w/wireless mic	Bob MacFarland	1/8/16
Bullhorn	George Korody	1/7/16
DVD Player	Gordon Hansen	2/16/16
Projection Screen 6'	Mike Dolsen	1/8/16
Projector, ViewSonic	Tim Campbell	2/17/16
<u>Demonstration Tools</u>		
Weight On Planets Scale	George Korody	1/7/16
Lunar Phase Kit	Bob MacFarland	1/8/16
100 ft Scale Model Solar System Kit	Bob MacFarland	1/8/16
<u>Display Items</u>		
Astronomy Event Sign (3' X 6')	Gordon Hansen	2/16/16
PVC Display Board - Folding	Sandra Macika	1/8/16
Banner – Small (24" X 32")	George Korody	1/7/16
Banner – Medium (24" X 72")	Sandra Macika	1/8/16
Banner – Large (32" X 16')	George Korody	1/8/16
Tri-Fold Presentation Boards	Don Klaser	1/8/16
Tri-Fold Poster Board (Early Club Photos)	George Korody	1/7/16
<u>Other</u>		
Canopy (10' X 10')	Tim Campbell	2/15/16
Equipment Etching Tool	Greg Ozimek	1/10/16
Pop Cooler	Michael Dolsen	1/8/16

FAAC Equip Report 11/20/15

By Dennis Salliotte

<u>EQUIPMENT KITS</u>	<u>CARETAKER</u>	
<u>Telescopes</u>		
TK3 Celstrn 130 Newt Goto mount	Liam Finn	2/16/16
TK4 Clstrn 90 Refrctr w/man mount	Liam Finn	2/16/16
TK5 4 ½ “ Reflector, on Fitz GEM mount	Bob MacFarland	1/8/16
TK6 8” Orion 8XTi Dobsonian	Jennifer Monske CARETAKERSHIP IS AVAILABLE	9/11/15
TK1 Coronado PST solar scope w/double stack, Meade Autostar Goto mount & tripod and accessories	John McGill	1/9/16
<u>Binoculars</u>		
BK3 15x70 binocs, monopod mount	Bob MacFarland	1/8/16
BK4 20x80 binocs,altaz goto mount	Sandra Macika	1/8/16
BK5 25x70 binocs w/tripod adaptor	Tim Dey	1/16/16
<u>Eyepiece Kit</u>		
EPK1 Eyepieces, filters & accesories	Liam Finn	2/16/16
<u>Other</u>		
TA Sky Quality Meter	Syed Saifullah	1/8/16
TA Sky Atlas 2000.0	Tim Dey	1/16/16
TA Orion telescope binoviewer	Liam Finn	2/16/16
<u>Lincoln Park Observatory</u>		
LPO Celestron binoviewer #93691	Tim Dey	1/16/16
LPO Celestron 2X 1.25” Barlow	Tim Dey	1/16/16

FAAC Equip Report 11/20/15

By Dennis Salliotte

Imaging SIG		
C1 Celestron NexImage Solar System Imager model #93712	Gordon Hansen	2/16/16
C2 Meade Deep Sky Imager PRO III w/AutoStar Suite	Gordon Hansen	2/16/16
C3 Orion StarShoot Deep Space Video Camera NTSC #52185 w/video capture device #52178	Gordon Hansen	2/16/16
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	2/16/16
C5 Orion StarShoot Deep Space Video Camera II #52195 AND Orion StarShoot iPhone Control for Deep Space Video Camera II #52195	Gordon Hansen	2/16/16
CA1 Rigel Systems Spectroscope	Gordon Hansen	2/16/16
CA2 Celestron 1.25" to T-Adapter(male thread) Model #93625	Gordon Hansen	2/16/16
CA3 Canon EOS deluxe astrophoto kit FOR Canon bayonet T-thread adapter ans variable 1.25" extender	Gordon Hansen	2/16/16
CA4 Orion StarShoot LCD-DVR #58125 2.5" LCD screen	Gordon Hansen	2/16/16
CA5 Celestron Canon EOS T-ring adapter #93419	Gordon Hansen	2/16/16
<u>Special Event Use Only- Not Available For Loan Out</u>		
TK2 Meade 8" ETX-LS-ACF w/tripod, voice assist, computerized GPS plus MANY (35+) accessories	Tim Dey	1/16/16
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	1/10/16
BK2 Zhumell 25x100 binoculars, hard case & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika	1/8/16
TAK1 Night Vision Intensification binocular unit	George Korody	1/7/16
Dennis Salliotte equipment@fordastronomyclub.com		

REMINDER: FAAC membership renewals were due by January 31, 2016.

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

If you are renewing after January 31st 2016 Send your check for \$30 to:

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

Or bring your money to the next 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 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.

Ford Amateur Astronomy Club
Star Stuff Newsletter
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Dearborn MI 48121-7527