

# THE EVENT HORIZON



## ST. LOUIS ASTRONOMICAL SOCIETY

*Devoted to the Interest and Advancement  
of the Science of Astronomy*

VOLUME 24, Issue 5  
May, 2014

### Get Cratered: Brought to you by the letter M (Moon, Mars, Mercury)

by

**Dr. Pamela Gay**

**Southern Illinois University - Ed-  
wardsville**

Dr. Pamela Gay will be featured at the May meeting of the St. Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, May 16, in McDonnell Hall, Room 162, on the Washington University campus.

Centuries ago, research in astronomy was done mostly by amateurs unpaid volunteers. Then telescopes got much larger, specialized instruments got very expensive, and professional astronomers took over. But with the rise of the internet and fast personal computers, amateurs can again play a big role in modern research and do it at home! Citizen science projects in astronomy allow amateurs to download images from major telescopes and from robot spacecraft. Free software first provides the training and then provides the actual images for amateurs to work with. Pamela Gay has been deeply involved with a number of citizen science projects classifying distant galaxies, searching for planets around other stars, - and examining craters on planets and satellites in our own solar system.

Dr. Gay is an Assistant Research Professor in the Center for STEM of SIUE. She is an astronomer, writer, and podcaster focused on using new media to engage people in science and technology. Her best-known project may be Astronomy Cast, a podcast co-housed with Fraser Cain, Producer of Universe Today.

**June Meeting:** Alex Meshik - Early History of the Solar System

## MSRAL 2014

**MEET US IN ST LOUIS!**

**Register Now!**

[www.slasonline.org/msral2014.html](http://www.slasonline.org/msral2014.html)

**Friday, June 6th - Planetarium**

- \* **Registration noon-8pm**
- \* **Star-B-Q 4:30-6:30**
- \* **John Lakey 6:00-6:45**
- \* **Sky Tonight**
- \* **Public Telescope Viewing—Bring your telescope! We would like to make this a massive event!**
- \* **Parking on the road south of the archery field.**
- \* **2 Laserium Shows, Omnimax**
- \* **Terrace at the Moonrise Hotel !**

**Saturday, June 7th - Wash U.**

- \* **MSRAL Business meeting 8am**
- \* **Sessions: 9am - 5pm**
- \* **Vendors 8am - 6pm**
- \* **Door Prizes all day! \$1100 worth!**
- \* **Boxed lunch - noon**
- \* **NASA Data Center Tours**
- \* **Banquet 6:30pm - 10:00pm**
- \* **Keynote speaker - Ray Arvidson**
- \* **Telescope drawing**

**Sunday, June 8th - Wash U.**

- \* **Astrophotography workshops 8am - noon**
- \* **Vendors 8am - noon**
- \* **Sessions 8am - noon**
- \* **Celestron imager drawing**

**MORE DETAILS INSIDE!**

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## President's Corner

by Jim Small

May brought us many star parties (well, scheduled anyway) and astronomy day at the Planetarium. John Lakey reported that 1000 people came through the doors for the day. As reported in another article, there were several SLAS members who volunteered. Thanks to all who set up solar scopes and who helped at tables inside. We gave away 7 telescopes and a subscription to Astronomy magazine!

MSRAL is coming along nicely! To the right is the current list of sponsors for the event and we have amassed over \$1000 in door prizes so far! As seen on the next page, the speaker line-up is set and we have a busy day all day scheduled for the conference.

DEADLINES are coming up! Don't miss out and don't pay extra for the conference! We really need to get things set for the meals, etc. , so make sure you get registered! Remember, even if you're a volunteer, you still need to register for the conference! No freebies! (not even for Mark and myself!)

If you wish to volunteer, please come to the meetings and find out what needs to be done. If you can't make it to the meeting, see John Beaury to volunteer for the conference and he will get you squared away.

Meetings for MSRAL will take place the next three Monday nights at Young's Restaurant in Valley Park at 6:00 pm. Be there if you wish to help!

Here is the link for the registration page: [www.slasonline.org/msral2014.html](http://www.slasonline.org/msral2014.html) The deadline for early registration is May 26. After that date, prices will increase.

Costs will be as follows as of this writing Registration: \$30, StarBQ: \$25, Saturday lunch: \$12, Banquet \$40. Coffee and a light continental breakfast will also be provided for both Saturday and Sunday. Rooms will be available at the Knight Center for \$99 plus tax. Be sure to use "MSRAL Annual Conference" when making reservations or they won't find the discount. We have established Ian Redmount, Ray Arvidson, Michael Freidlander and others as speakers so far.

We'll see you at Mid-States!

## SPONSORS FOR MSRAL 2014

EXPLORE  
SCIENTIFIC  
store



Explore Scientific donated a [BR-102S-00 refractor kit](#) and will send discount certificates for eyepieces and accessories



Celestron has donated a Nexstar 5 Solar System Imager. Celestron will also attend as a vendor and Lonnie Wege will speak at the conference



myCASE  
BUILDER

My Case Builder has donated 2 \$100 gift certificates

TelescopeS.NET  
by Woodland Hills Camera & Telescopes

Telescopes.net donated four gift certificates, 2 \$25 and 2 \$50,

BACKYARD ✓ EOS

Backyard EOS has donated 2 \$50 certificates for software



STELLARVUE  
HAND CRAFTED TELESCOPES

Stellarvue has donated a \$50 gift certificate



Bob's Knobs™  
COLLIMATION THUMBSCREWS

Bob's Knobs will donate a door prize



Ricks Astronomy Jewelry, Creve Coeur Camera and Astro league Sales will all donate door prizes.

## Speakers for MSRAL 2014

### Friday, June 6th

6:00 pm - John Lakey - New Horizons for the James S. McDonnell Planetarium

### Saturday, June 7th

9:15 - Joe Marcus - What Makes Comets Great

9:45 - Richard Schmude - Wideband Photometry of Mars, Venus, Jupiter and Saturn

10:45 - Thane Bopp - Visualizing the Universe via the 1 inch Solar System

11:15 - Chris Laskey, Bruce McMath - Remote Observatories and Imaging

1:15 - Catarina Ubach From Grains to Planets: What Is Going on in Protoplanetary Disks?

1:45 - Lonnie Wege - New Telescopes from Celestron

2:30 - Michael Friedlander - Woodhenge

3:00 - Christine Nobbe, Gloria Lloyd - #2Moon: Networking, Advocating, and Outreach thru Social Media

4:00 - Ian Redmount - General Relativity

Banquet Keynote - Ray Arvidson - Current Results of Mars Rovers, Curiosity and Opportunity

### Sunday, June 8th

9:00 - Annette Lee - Native Skywatchers

8:00 - Noon - Astrophotography workshops

#### Gregg Ruppel

8:00 am - Dealing with Gradients

9:00 am - Favorite Adobe PhotoShop Tips for Astrophotography

10:00 am - Plate-Solving to Find Your Target

11:00 am - Astronomy Tools Actions for Adobe PhotoShop

#### Dan Crowson

8:00 am - BackyardEOS and BackyardNIKON

9:00 am - BackyardEOS and BackyardNIKON (duplicate of #1)

10:00 am - Favorite Adobe PhotoShop Tips for Astrophotography

11:00 am - Identifying Objects in your Images using Free Tools

#### Astronomy Tools

Photographer Noel Carboni found that most of his images required a lot of processing as he was progressing with astrophotography. Noel created a set of Adobe PhotoShop actions that can be used to speed up processing. You get 34 actions for around \$22.

#### BackyardEOS and BackyardNIKON

BackyardEOS is the standard for astrophotography with a Canon DSLR. This program can be used for taking deep space object images as well as planetary movies. All of the features should be available for NIKON cameras through BackyardNIKON by the time the MSRL workshop starts.

#### Dealing with Gradients

If you take images from around here, you will probably end up with light pollution gradients. Both Gregg Ruppel and Dan Crowson mainly take images from heavily light-polluted skies so every image has a gradient. Gregg will present on how he deals with these using various tools.

#### Favorite Adobe PhotoShop Tips for Astrophotography

Adobe PhotoShop is still the tool of choice for processing astrophotography. Over the years of using this program, you learn a lot of tips and tricks to handle various situations. While we will be using PhotoShop, the tips and tricks will probably work with other paint programs so don't skip this one if you use a different program.

#### Identifying Objects in your Images using Free Tools

If you've ever taken an image and wondered what this star or that faint fuzzy spot is, this is the workshop for you. Dan Crowson will show how to 'solve' your image and then identify most objects in it using free tools. Time permitting, he will also show how to locate asteroids using the same kind of tools. This workshop goes beyond what you get from Astronomy.net.

#### Plate-Solving to Find Your Target

Still selecting stars to align on? Still manually framing your images over one or more nights? Not sure that you're pointing in the right place? Plate-solving will help you get more out of your imaging time by removing these manual processes. This process determines the exact location where your telescope is pointing.

## **MSRAL 2014 Committee Report May 15, 2014**

### **MSRAL2014 Announcements – General Announcements**

**MSRAL 2014 Brochure** – For a summary of all MSRAL 2014 has to offer go to the following link:

<http://www.slasonline.org/msraldocs/MSRAL2014brochure.pdf>

### **Here are some details you will find interesting**

**Register Now** - Please register quickly. Registration is only \$30 for all events. Fees for registration and meals go up after May 26. Registration online is easy. For those who have registered, may sure your payment by PayPal, Credit Card or check is completed or we cannot confirm your meals.

<http://www.slasonline.org/msral2014reg.html>

**Speakers and Activities** – Our speakers list is almost complete. If you would like to present, contact Papers Chairman Wayne Clark. Friday night will include a Star-B-Q and behind the scenes tour of the Planetarium. Saturday will include amateur and professional speakers and Sunday will include an astrophotography workshop. See our website or the MSRAL2014 brochure for more details.

### **Tours of Earth and Planetary Sciences Data Center**

Washington University's Department of Earth and Planetary Sciences has agreed to provide tours of its Data Center on Saturday June 7<sup>th</sup>. You can sign up for the tours when you check in at the registration tables, Friday night or Saturday morning. Tour stops will include the Mars image collection, the Mars Rover mockup display, and the Lunar Geology image collection including images from the Lunar Reconnaissance Orbiter. Each tour group will be limited to eight people and a maximum of 48 people can be accommodated so sign up as soon as you arrive.

**Astronomical League Sales** - Astronomical League Sales will have an exhibit at MSRAL2014 you can pre-order your items from the League website and pick up your items at MSRAL and save shipping cost! Order early to insure your item is ready by MSRAL2014. Visit their website at:

<http://www.astroleague.org/store/index.php>

**Door Prizes and Exhibits** – We have over \$1000 in door prizes to give-away this year. Explore Scientific donated a BR-102S-00 refractor kit as one of our major door prizes this year. This is a \$325 item. Celestron will be an exhibitor this year and they have donated a Nexstar 5 imager! This is a \$200 item. For a complete list of donations go to our website. Door prize tickets will be included in your registration packet and you must be present when if your ticket is drawn

<http://www.slasonline.org/msral2014.html>

**Dorm rooms and Hotels** - The May 16<sup>th</sup> deadline to guaranty your Knight Center or dorm room is tomorrow! To reserve rooms at the Knight Center make sure to tell them “MSRAL, Annual Conference” to get the correct rate. Follow the Links below for more information. After May 16<sup>th</sup> it will be based on availability.

[http://slasonline.org/MSRAL2014\\_Knight\\_Center\\_Hotel.pdf](http://slasonline.org/MSRAL2014_Knight_Center_Hotel.pdf)

[http://slasonline.org/MSRAL2014\\_Dorm\\_Info.pdf](http://slasonline.org/MSRAL2014_Dorm_Info.pdf)

We hope to see all of you here in St. Louis June 6-8, 2014.

Best Regards,

2014 MSRAL Committee

St. Louis Astronomical Society

## **Important Links for MSRAL 2014**

MSRAL2014 Home Page: <http://www.slasonline.org/msral2014.html>

MSRAL Website [www.msral.org](http://www.msral.org)

Meeting Location, Saturday 8-5, Sunday 8-noon: Crow Hall, [Washington University, St. Louis, MO](http://www.washington.edu)

Star-BQ: [James S. McDonnell Planetarium](http://www.jamesmcdonnellplanetarium.org), Friday Night

Banquet: [Knight Center, Washington University](http://www.knightcenter.org), Saturday Night

Knight Center Rooms and Washington University dorm rooms:

[http://slasonline.org/MSRAL2014\\_Knight\\_Center\\_Hotel.pdf](http://slasonline.org/MSRAL2014_Knight_Center_Hotel.pdf)

[http://slasonline.org/MSRAL2014\\_Dorm\\_Info.pdf](http://slasonline.org/MSRAL2014_Dorm_Info.pdf)

MSRAL2014 Brochure:

<http://www.slasonline.org/MSRAL2014brochure.pdf>

## **Important Dates**

**May 16, 2014** – Last day to reserve MSRAL rooms at the Knight Center or dorm rooms .

**May 26, 2014** - Early Registration ends, price increases to \$35 per person - Banquet, Star-B-Q and lunches will also increase

**June 1, 2014** - Last Day to Register for Banquet and Meals

**June 6, 2014** - Friday Night Star-B-Q, Telescope Viewing, Planetarium Sky Show, and Laserium Shows

**June 7, 2014** - AM/PM Talks and Paper Presentations, Annual Business Meeting, Earth and Planetary Science Center with NASA Data Node (E&PSC) tours

**June 8, 2014** - AM – Astrophotography workshop and morning papers

## **Edward Jones YMCA Stargazing**

Date: Monday, May 5, 2014 Setup Time: 7 – 7:30 pm

Time: 7:30 – 10:15 pm (2.75 hours)

Volunteers: Cook Feldman, Don Ficken, Donna Ficken

Guests: About 60 adults and kids

Notes: A great evening in the front of the Edwards Jones YMCA with temperatures in the 70's and a slight breeze. We setup our telescopes around 7:30 pm with a 41% waxing Moon visible even before sunset. In addition to the Moon, Jupiter and Mars were favorite targets. In spite of the light pollution, we were able to find the Big Dipper and use it a launching point for star hopping to Arcturus and other stars/constellations. Our 60 visitors were very dedicated with several staying nearly an hour with many questions about the night sky, our solar system, stars, comets, telescopes, etc.. Some went home to retrieve their families and friends with one bringing back two cars full of folks. Guests were very appreciative of the outreach event and wanted to know when the next event at the Edward Jones YMCA would be scheduled (Monday, June 2). Overall, a great evening and opportunity to talk about the night sky.

Clear Skies,

Don\_Ficken

St. Louis Astronomical Society

Edward Jones YMCA Stargazing Lead

## Astronomy Day 2014

by Grant Martin

Dateline 10 May 2014 - Astronomy day at the St Louis Science center. Seven members of the St Louis astronomical society volunteered to support the days events at the planetarium. Members Grant Martin, Mark Jones, Don Ficken and Larry Campbell manned tables inside while Cook Feldman, John Beaury and Jim Trull set up solar observing stations outside.

tronomy magazine!

Inside was cool and relaxed. Table one contained SLAS & MRAL brochures as well as the usual compliment of free educational handouts.

Table two was manned by Mark Jones and Don Ficken. Mark was holding planesphere construction sessions for guests who wanted to make a paper planesphere. Mark had also setup a meteorite display with digital microscope. He had borrowed the microscope and connected it to his laptop so the folks could get "up close and personal" with the



Stereo image of SLAS table photo by Grant Martin

Several hundred people passed by the tables and the solar stations and eight local guests won door prizes - six Galileo telescopes, a Celestron First scope and a subscription to As-

display. One guest asked a very insightful question: "Is a meteorologist someone who studies meteors?"

Over at table three, Larry Campbell had several telescopes and various miscellany setup and was fielding all questions astronomy!

Don Ficken was our utility player filling in where needed, answering all questions both membership and astronomical as well as just being a solid support when the slogging got tough.

I just slacked off by taking pictures and helping folks look at the Moon through SLAS member Herb Sassenbergs' handmade refracting telescope.

Back in the late 50s', Herb handbuilt an entire 90mm f16 refracting telescope. Not only did he machine every metal part of the scope and equatorial head, he also hand ground the oil spaced doublet objective lens. Throughout the remainder of the 50's and most of the 60's, Herb would setup this scope at SLAS outreach events. Herb died a number of years ago so this scope languished in the hands of several owners. I acquired it back in 2011, restored it and am now using it at outreach events again. It's useful to show not



Outside with (l-r) Cook Feldman, Jim Trull (in distance) and John Beaury photo by Grant Martin

(Continued on page 6)

(Continued from page 5)

only WHAT you can make but it also shows that old equipment can be just as good many, many years after it was made. By the way, guests were able to "look at the moon" via an image taped to the wall on the far side of the rotunda.



Guest at indoor scope photo by Grant Martin

some serious door prizes. At 3PM names were called and eight winners walked out with bigger smiles on their faces than when they arrived.

As a side note, one of the images attached to this article is formatted for "3D" (or stereo) viewing. I took a number of



John Lakey(I) and Mark Jones holding Raffle photo by Grant Martin

Outside, Cook, Jim and John were providing "WOW" views of the sun in white and h-Alpha light. Jim and Cook had their Coronado PSTs for h-Alpha viewing while John used his Dob and a filter for white light viewing.

3D images of the event and those images can be "seen" at this link: <http://tinyurl.com/Astronomy-day-2014-3D>

These images are designed to use the "Cross eye" method to "see" the 3D effect. To see this, focus on the center of the vertical line. Slowly cross your eyes and as you do this, notice the center line



Jim Trull setup photo by Grant Martin

Jim's setup was the most advanced and complex of all. He had attached his PST to his 8 inch Schmidt (also with white light filter) and then connected a video eyepiece to the PST. In a box on a table, the image from the eyepiece was shown on a small video monitor.



Larry Campbell manning his table photo by Grant Martin

gins to split and a "third" image appears to expand in the center of the screen. This third image will be the left and right images moving closer together towards the center of the screen. Continue to cross your eyes until both images converge to make one, single 3D image. It can take some practice so start out with a smaller image size on the screen. If you're not that skilled at viewing images like this, it might help to look at the screen from further away than normal as you merge the image.

Regular "2D" images can be seen at this link: <http://tinyurl.com/Astronomy-day-2014-2D>

Throughout the day, guests were filling out raffle tickets for

# Loaner Scope Update

by  
Mark Jones



I delivered the 13" Coultter and placed it in the shed. I took the leftover parts from the old blue Coultter and put them in a cardboard box for future telescope making. See photo below. The rest of the blue Coultter I cut up and put in the trash.

I delivered the 100mm Celestron Refractor in a suite case and we were able to fit all the parts in the suit case including the accessory box! See photos below.



I cleaned up the dirty 13" mirror from the blue 13" coultter and diagonal and they look really good. Suitable for reuse. We could auction off or save as spares. After I cleaned the mirrors, I wrapped them up with foam and they are in boxes (MacBook box). See photo below.



I took the ETX-90EC home to look at the electronic focuser. I wanted to permanently remove the electronic focuser and add a knob. I called Meade, but because the scope is old, they



do not have a replacement focuser knob. If any of you get on Astromart, look to see if anyone sells knobs. I will contact Bob's Knobs. I may ask Bill Davis if he could

## STARFLEET COMMAND MISSION UPDATES FOR MAY 2014

**EXTRA SOLAR PLANETS COUNT** As of: 09 May 2014

The Extra Solar Planets Encyclopedia:	1786
<a href="http://www.exoplanet.eu">www.exoplanet.eu</a>	
The NASA Exoplanet Archive:	1706
<a href="http://www.planetquest.jpl.nasa.gov">www.planetquest.jpl.nasa.gov</a>	
Exoplanet Orbit Database:	1491
<a href="http://www.exoplanets.org">www.exoplanets.org</a>	
Arecibo-The Exoplanets Catalog:	1786
<a href="http://www.phl.upr.edu/projects/habitable-exoplanets-catalog">www.phl.upr.edu/projects/habitable-exoplanets-catalog</a>	
Open Exoplanet Catalog:	1776
<a href="http://www.openexoplanetcatalogue.com">www.openexoplanetcatalogue.com</a>	

### FUTURE MISSIONS

OSIRIS-Rex (USA) Sept 2016 Asteroid Bennu Sample Return Mission **To have your name place on the OSIRIS-Rex mission: [www.planetary.org/get-involved/messages](http://www.planetary.org/get-involved/messages)**

### USAF ORBITAL TEST VEHICLE X-37B

OTV 3 "Vehicle 1" USA-240 11-Dec-2012

### SPACE-X DRAGON

DESIGNATION	LAUNCHED	DOCKED
CRS-3	18-Apr-2014	20-Apr-2014
<b>"See Notes Section"</b>		
CRS-4	6-Jun-2014	

**CYGNUS** Cygnus is the Latinized Greek word for Swan and a northern constellation

DESIGNATION	LAUNCHED	DOCKED
CRS-2	10-Jun-2014	

### ESA AUTOMATED TRANSFER VEHICLE

DESIGNATION	DATE LAUNCHED
ATV-005: Georges Lemaitre	26-Jul-2014

### INTERNATIONAL SPACE STATION CREWS

**EXPEDITION 40: MISSION STARTED: 13 May 2014**

CREW MEMBERS	COUNTRY	UP/DOWN	STARTED-
Steven R Swanson (CDR)	USA	Soyuz: TMA-12M	25-Mar-2014
Aleksandr Skvortsov	Russia		
Oleg Artemyev	Russia		

### NOTES SECTION

**MESSENGER** \*20 April 2014: MESSENGER completed its 3,000th orbit of Mercury and moved closer to the planet than any spacecraft has been before, dropping to an altitude of 123.7 miles above the planet's surface.

**ROSETTA** \* May 2014: The Rosetta spacecraft is still on target to rendezvous with Comet Churyumov-Gerasimenko.

**LADEE** \*18 April 2014 NASA announces LADEE impacted on the Far Side of the Moon. NASA will use the LRO to locate the site.

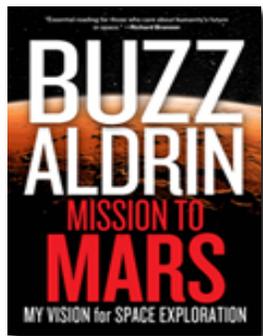
**OTV 3 "Vehicle 1"**\*24 April 2014 OTV 3 has spent 500 days in orbit.

**SPACE-X DRAGON** \*During the week of, 19 May 2014, CRS-3 will undock from ISS and will return to Earth.

**International Space Station** \*On 13 May, Expedition 39 turned over to Expedition 40. Expedition 41 will launch on 28 May 2014 and dock with the ISS later the same day.

## GET IT SIGNED BY BUZZ HIM-SELF!

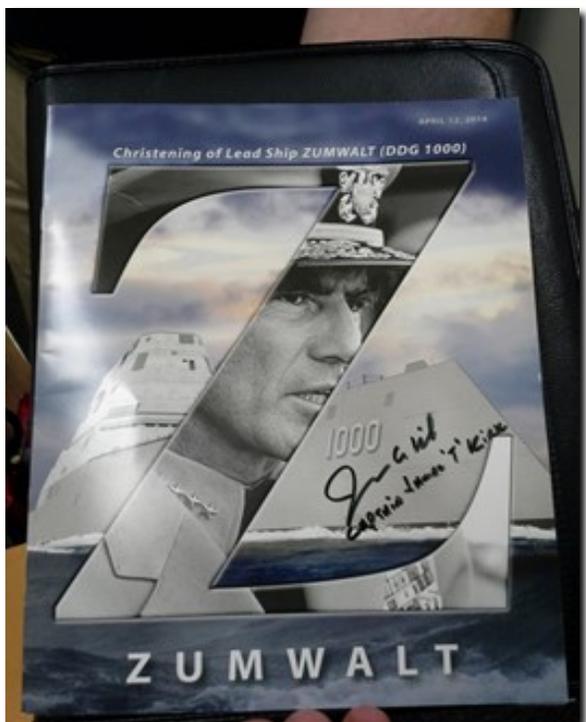
On 26 July 2014, The USS HORNET MUSEUM will host "Splashdown 45" to celebrate the anniversary of the Apollo 11 & 12 Moon missions. Dr. Aldrin will be our special guest - save time and pre-order your copy now. In the Notes section, state you will not be able to attend and to please have Buzz sign the book. <http://usshornet.stores.yahoo.net/missiontomars.html>



**Mission to Mars** Item# 866 \$26.00

### USS ZUMWALT

Now for something totally cool. As you know, the GREATEST Starship Captain Starfleet has ever know has yet to be born in Iowa J, but the US Navy saw fit to go ahead a give him his own Command. That is correct, Captain James A Kirk, is the CO of the US Navy's newest Destroyer, USS Zumwalt (DD-1000). I wrote to him and asked him if he would send me a signed picture of his ship. This is what he sent.



## St. Louis Astronomical Society Profit & Loss Budget vs. Actual

January through April 2014

	Jan - Apr 14	Budget	\$ Over Budget
<b>Ordinary Income/Expense</b>			
Income			
Magazine Subscription	400.65	2,139.25	(1,738.60)
Membership Dues	1,260.00	1,430.00	(170.00)
<b>Total Income</b>	<b>1,660.65</b>	<b>3,569.25</b>	<b>(1,908.60)</b>
Cost of Goods Sold			
Magazine Subscriptions	400.65	2,139.25	(1,738.60)
<b>Total COGS</b>	<b>400.65</b>	<b>2,139.25</b>	<b>(1,738.60)</b>
<b>Gross Profit</b>	<b>1,260.00</b>	<b>1,430.00</b>	<b>(170.00)</b>
Expense			
1-Programs & Events	84.99	508.33	(423.34)
2-Newsletter	279.26	95.00	184.26
3-Library expense	88.62	75.00	13.62
5-Loaner Scopes	10.81	75.00	(64.19)
6-Brochures	43.69	83.33	(39.64)
7-Insurance	380.00	380.00	
8-Website	113.88	108.00	5.88
9-Administrative Expenses	90.74	142.00	(51.26)
<b>Total Expense</b>	<b>1,091.99</b>	<b>1,466.66</b>	<b>(374.67)</b>
<b>Net Ordinary Income</b>	<b>168.01</b>	<b>(36.66)</b>	<b>204.67</b>
<b>Other Income/Expense</b>			
Other Income			
Donations	231.33		
Interest Income	0.55	33.00	(32.45)
<b>Total Other Income</b>	<b>231.88</b>	<b>33.00</b>	<b>198.88</b>
<b>Net Other Income</b>	<b>231.88</b>	<b>33.00</b>	<b>198.88</b>
<b>Net Income</b>	<b>399.89</b>	<b>(3.66)</b>	<b>403.55</b>

### Current Assets

<b>Checking/Savings</b>		
Checking - First Bank	3,263.28	3,645.78
Deposit, Certificate of	20,020.23	20,020.23
Merchandise Change Fund	20.00	20.00
PayPal	24.15	0.00
Savings - First Bank	3,357.60	3,358.15
YMCA Trout Lodge Escrow	877.87	877.87
<b>Total Checking/Savings</b>	<b>27,563.13</b>	<b>27,922.03</b>
<b>Other Current Assets</b>		
Inventory Asset	1,707.15	1,707.15
Investment in Mid-States 2014	2,000.00	2,000.00
<b>Total Other Current Assets</b>	<b>3,707.15</b>	<b>3,707.15</b>
<b>Total Current Assets</b>	<b>31,270.28</b>	<b>31,629.18</b>
<b>Fixed Assets</b>		
Accum Depr - Office Equip	(216.65)	(216.65)
Office Equipment	216.65	216.65
<b>Total Fixed Assets</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL ASSETS</b>	<b>31,270.28</b>	<b>31,629.18</b>
<b>LIABILITIES &amp; EQUITY</b>		
Liabilities		
Current Liabilities		
Accounts Payable	40.99	0.00
<b>Total Accounts Payable</b>	<b>40.99</b>	<b>0.00</b>
<b>Total Current Liabilities</b>	<b>40.99</b>	<b>0.00</b>

**SAINT LOUIS ASTRONOMICAL SOCIETY**  
**MINUTES OF EXECUTIVE BOARD MEETING:**  
**April 10, 2014**

**1. Opening Activities** Meeting called to order at 7:03pm  
Attendees: Jim Small, Grant Martin, Larry Campbell, Brad Waller, Mark Jones, Tom Nickelson

March Minutes were distributed prior to meeting. Motion to accept minutes made by Tom Nickelson and second by Brad Waller. Minutes approved by Board

**2. External Business**

**SLSC:** First Friday well attended but cloudy good in door program. SLAS will provide solar telescope viewing for "SUN" day from 1-3pm at SLSC if clear. Astronomy Day May 10<sup>th</sup> 10-4, evening event at Kirkwood Park. Motion for SLAS to donate 6 Galileoscopes for Astronomy Day made by Mark Jones second Brad Waller. Motion passed by Board

**Children's Hospital events.** Rick Menendez has several Children's Hospital event planned for 2014. Last year SLAS donated Galileoscopes to these events. Motion by Brad Waller for SLAS to donate 6 Galileoscopes for 2014 events at Children's Hospital. Second by Tom Nickelson, motion passed by Board. Mark will send e-mail to Don and Rick about Board decision

**Homemade Fest:** Went well, about 25 members in attendance. Meeting room and kitchen were great. Room was free because of our telescope viewing sessions at Kirkwood Park. Hopefully we can have Homemade Fest at Kirkwood again next year.

**Next board meeting May 8th:** Board meeting dates for the year are confirmed from the YMCA: 6/12, 7/10, 8/7, 9/11, 10/9, 11/6, 12/11.

**3. Director Reports:**

**President – Jim S** **MSRAL 2014** more progress with Celestron and Stellarvue. Creve Coeur Camera won't be at the meeting, but may contribute door prizes. Made contact with Explore Scientific about door prize. Dr. Ian Redmount will speak on Saturday. Dorm rooms are now available.

**Vice President – Bill Biermann** Speakers: April – Bob Criss, May – Pamela Gay

**Astro 101:** Topic needs to be determined. One of Rick Menendez students would like to present some of his astrophotography.

**Secretary – Mark J**

**No report**

**Treasurer/ALCor** – Donations: Girl Scouts Eastern Missouri \$50.00, LaSalle Springs \$100.00 Treasurers reports were sent out to board. \$32 over Budget for first quarter.

**Hospitality – Grant M**

No report

**Board member at large reports**

**Larry Campbell**

Been doing lots of star parties

**Tom Nickelson**

Space Grant for people with disabilities. Easy arm and mount arrived. Short tube 80mm scope is still on backorder until the middle of this month.

**Brad Waller:**

No report

**4. Committee Reports: If needed**

**Membership** – Membership list with all expired members from 2013 was sent out by Cook. People on the list should be contacted by phone to investigate reason membership expired. Rhonda forwarded information about some of the members on the list.

**Librarian** – Picked up copies of the book Cosmos and a set of PBS DVD's on Space and Astronomy.

**Newsletter** – articles due by 4/11/14

**Night Sky Network** – New updates coming in April

**Dark Site** – Dark Site Observing Dates are April 26, May 3, May 24 (Memorial Day weekend), May 31 (new moon), June 28, July 26, Aug 23, Sep 27, Oct 25

**Loaner Equipment – Meeting with Gregg Gaines on 4/13 to deliver 13" and 4" scopes**

**Star Parties: Details for the next month's confirmed events below.**

April 11, 2014 Bonhomme School, April 14, 2014 Mallinckrodt Career Night, April 26, 2014 Snores and Smores Camp Out Kirkwood Park, May 2 SLSC PTV, may 3 Dark Sky Observing, May 5, EJ YMCA, May 7 Francis Park, May 8 Board meeting, Manchester Park, May 9 Stargazing at the Arch, May 10 Astronomy Day, Creve Coeur Camera expo, Kirkwood Park, May 17 Night Sky over Babler, May 24, 31 Dark Sky Observing

**5. Old Business –**

None

**6. New Business**

May elections. Open nomination at April Meeting

Present the MSRAL slide show at the April SLAS meeting

**7. Closing Activities**

Brad Waller motion to close meeting, Larry Campbell second, motion passed.

Meeting adjourned 8:33pm

### Upcoming Star Parties and Other Events

For details on these and other upcoming events, check out the **Night Sky Network Calendar** linked on the Home Page for SLAS at <http://www.slasonline.org>

**SLAS Executive Board Meetings** Location will be at the **Edward Jones YMCA**

6/12/2014	7/10/2014
8/7/2014	9/11/2014
10/9/2014	11/6/2014
12/11/2014	

#### Dark Sky Observing Dates

May 24 (Memorial Day weekend)  
May 31 (new moon)  
June 28  
July 26  
Aug 30  
Sep 27  
Oct 25

**Francis Park Events:** These events are on **Wednesdays** the week nearest the first quarter Moon

June 4 (6 day old Moon) (1st Wed.)  
July 2 (4 day old Moon) (1st Wed.)  
August 6 (9 day old Moon) (1st Wed.)  
September 3 (8 day old Moon) (1st Wed.)  
October 1 (7 day old Moon) (1st Wed.)  
October 29 (6 day old Moon) (5th Wed.)

**SLSC Public Telescope Viewing Events:** These events are held the first Friday of the month-

Planetarium shows start at 7pm  
May 2, 2014

#### YMCA Edward Jones Star Parties

6/2/2014  
6/30/2014 (two in June is because of Moon timing)  
8/14/2014

### Pattonville Observatory Open House Dates

**May 16, 2014** Friday 9:00-11:00 p.m. Public Program  
Jupiter (early), Saturn, Mars, M13 (the Great Hercules cluster), M104, M96, globular clusters, constellations and stars

## SLAS EVENTS

### May

<b>16 FRI</b>	<b>SLAS Regular Meeting</b>
<b>17 Sat</b>	<b>Night Skies Over Babler</b>
<b>24 SAT</b>	<b>SLAS Dark Sky Observing</b>
<b>31 SAT</b>	<b>SLAS Dark Sky Observing</b>

### June

<b>2 Mon</b>	<b>Edward Jones YMCA</b>
<b>3 Tue</b>	<b>Children's Hospital</b>
<b>4 Wed</b>	<b>Francis Park</b>
<b>6 Fri</b>	<b>SLSC Public Telescope Viewing</b>

### JUNE 6

**MSRAL Convention, First Friday!**

### JUNE 7

**MSRAL**

### JUNE 8

**MSRAL**

**13 Fri**  
**19 Thur**  
**21 Sat**

**Stargazing at the Gateway Arch**  
**Maplewood Public Library**  
**Great American Backyard Campout**  
**Des Peres Park**  
**Edward Jones YMCA**

### 30 Mon

### July

**2 Wed**  
**3 Thurs**  
**4 Fri**  
**5 Sat**  
**9 Wed**  
**10 Thur**  
**11 Fri**  
**18 Fri**  
**26 Sat**

**Francis Park**  
**Public Telescope Viewing**  
**Public Telescope Viewing**  
**Public Telescope Viewing**  
**Girl Scouts Camp Fiddlecreek**  
**SLAS board meeting**  
**Gateway Arch**  
**SLAS Regular Meeting**  
**SLAS Dark Sky Observing**

### LET US KNOW YOU ARE COMING!

To RSVP for any of these events log in to the Night Sky Network and submit your RSVP. If the event is canceled, you will be notified immediately according to the preferences you have selected. For more information about events, such as Moon phase, clear sky clock, weather report or a map of what's up, see the calendar online.



# SLAS MEMBERSHIP APPLICATION



Name: Last \_\_\_\_\_  
 First, Middle Initial \_\_\_\_\_  
 Address \_\_\_\_\_  
 City, State, Zip Code \_\_\_\_\_  
 email address \_\_\_\_\_

Youth @ \$10.00 / 1 year (18 yrs or younger) \$ \_\_\_\_\_  
 Individual @ \$25.00 / 1 year \$ \_\_\_\_\_  
 Family @ \$40.00/1 year \$ \_\_\_\_\_  
**Publications with discount available with your SLAS membership:**  
 Sky and Telescope @ \$32.95 / 1 year \$ \_\_\_\_\_  
 (S&T may also be renewed at their website:  
<http://www.skyandtelescope.com>)  
 Astronomy @ \$34.00 / 1 year \$ \_\_\_\_\_  
**TOTAL ENCLOSED** \$ \_\_\_\_\_

Please send completed form with check (no cash please) made payable to  
 St Louis Astronomical Society  
 Don Ficken, Treasurer  
 13024 Barrett Crossing CT  
 St. Louis, MO 63122

Check all that apply:  
 Renewal  
 Address Change Only  
 Please send my newsletter by regular mail  
 **New Member!**



SLAS OFFICERS		201309.pub
<b>President</b> <i>Jim Small</i>	president at slasonline.org	314-307-0692
<b>Vice President</b> <i>Bill Biermann</i>	vicepresident at slasonline.org	314-596-6738
<b>Secretary</b> <i>Mark Jones</i>	secretary at slasonline.org	636-394-2342
<b>Treasurer</b> <i>Rhonda Whelan, Cook Feldman, Don Ficken (membership)</i>	treasurer at slasonline.org	636-225-0269
<b>Hospitality</b> <i>Grant Martin</i>	hospitality at slasonline.org	
<b>Board Members at Large:</b>		
<i>Tom Nickelson</i>	board14 at slasonline.org	
<i>Larry Campbell</i>	board15 at slasonline.org	636-244-2867
<i>Bradley Waller</i>	board16 at slasonline.org	314-481-7250
<b>ALCOR</b> <i>Rhonda Whelan</i> (Astronomical League Correspondent ) treasurer at slasonline.org		314-750-0262
<b>MSRAL Rep.</b> <i>Jim Small</i>	msral_rep at astroleague.org	314-909-7211

COMMITTEE CHAIRS		
<b>Membership</b> <i>Don Ficken</i>	membership at slasonline.org	636-225-0269
<b>Publicity</b> <i>Rich Heuermann</i>	publicity at slasonline.org	314-962-9231
<b>'SLASdialogs' Moderator</b> <i>Mark Jones, Rhonda Whelan</i>	dialogsmoderator at yahoo.com	
<b>Webmaster</b> <i>Jim Small</i>	webmaster at slasonline.org	314-909-7211
<b>Newsletter Ed.</b> <i>Jim Small</i>	newsletter at slasonline.org	314-909-7211
<b>Loaner Equip.</b> <i>Greg Gaines</i>	loaner at slasonline.org	314-277-3082
<b>Merchandise</b> <i>Grant Martin</i>	merchandise at slasonline.org	
<b>Librarian</b> <i>Jim Small</i>	librarian at slasonline.org	314-909-7211
<b>Star Party Coord</b> <i>Mike Malolepszy</i>	starparty at slasonline.org	314-781-4701
<b>Dark Site Coord.</b> <i>Mark Jones</i>	darksite at slasonline.org	636-394-2342
<b>Observing Programs</b> <i>Mark Jones</i>	observing at slasonline.org	636-394-2342
<b>Telescope Making</b> <i>Bill Davis, Jim Melka</i>	telescope at slasonline.org	314-469-3061

***Devoted to the Interest and Advancement of the Science of Astronomy***

**ST. LOUIS ASTRONOMICAL SOCIETY**

**We're on the Web!**  
<http://www.slasonline.org>

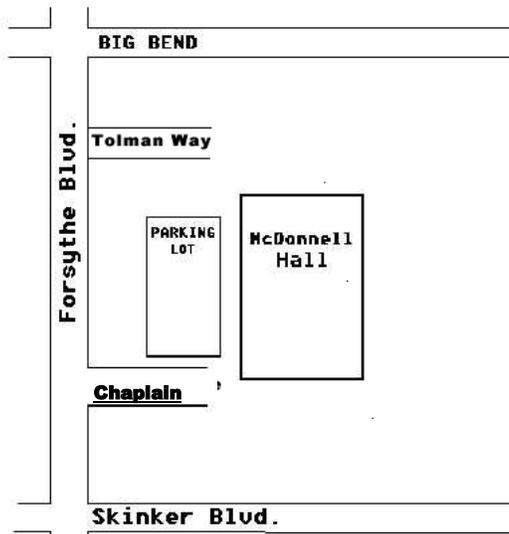


**Who We Are and What We Do**

St. Louis Astronomical Society is a not-for-profit organization established in 1936. SLAS is devoted to the interest and advancement of the science of astronomy. Our mission is to promote an understanding of the science of astronomy to our members and to the public. Membership is open to anyone with an interest in astronomy.

For more information contact any SLAS officer or visit our website listed above. SLAS is affiliated with the Astronomical League, Night Sky Network and the Mid-States Region of the Astronomical League.

Meetings are held the 3rd Friday of each month at McDonnell Hall at Washington University. See the map to the right for directions.



**St. Louis Astronomical Society**

Jim Small  
13128 Cozyhill Drive  
St. Louis, MO 63122

