

THE EVENT HORIZON



ST. LOUIS ASTRONOMICAL SOCIETY

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

**VOLUME 24, Issue 4
April, 2014**

Mid States Region



Cosmic Spin – The Turning of Planets, Stars, and Galaxies

by

Dr. Robert Criss

Washington University

Dr. Robert Criss will be featured at the April meeting of the St. Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, April 18, in McDonnell Hall, Room 162, on the Washington University campus.

Everything in the universe is in motion, and much of that motion is spin. Rotational dynamics – the motions and effects caused by spinning – explains many properties of planets, stars, and galaxies. Dr. Criss will talk about a range of topics, including the origin of the rotation of the solar system, the slowing down of spin in super-dense white dwarf stars, and how the slow rotation of the entire Milky Way galaxy reveals some unexpected features of its structure.

Robert Criss is a Professor of Earth and Planetary Sciences at Washington University. His primary research interest is in the use of stable isotopes to trace the flow of groundwater and its contaminants. He also studies the origin, character and behavior of river and flood waters in the Mississippi, Missouri, and Meramec River basins. But his scientific curiosity often leads him to far different areas – such as the effects of rotation on a broad range of astronomical objects.

May meeting: Pamela Gay - Topic TBD
June meeting: Alex Meshik - Early History of the Solar System

Deadline for Early Registration for MSRAL 2014 is May 26. Register Now!

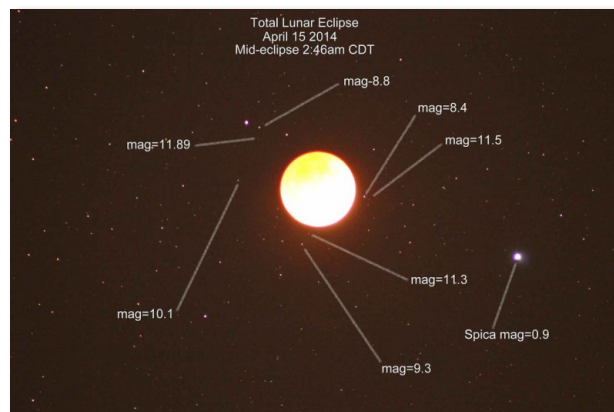
The registration page is open and ready to receive orders for the Registration, Star-B-Q, Banquet, and Lunch on Saturday To register, visit www.slasonline.org/msral2014.html or click the link on the SLAS home page. The deadline for early registration is May 26!

If you are going to book a room at the Knight Center, you MUST use “MSRAL Annual Convention” as the name for the discount or they won’t find the rooms we reserved.

Our next MSRAL committee meeting will be held this Sunday, April 27th at Young’s Restaurant at 6:00 pm. If you would like to volunteer to help at the convention, let John Beaury or anyone on the committee know and he will forward your name to us to work at the meeting. THANKS to everyone on the committee for their help so far!

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Mark Jones shot and labeled this 20s exposure of the total lunar eclipse from April 15.

President's Corner

by Jim Small

May will be another big month for star parties with SLAS. Be sure to RSVP on Night Sky Network so we know you are attending the event! Thanks to all the volunteers for the events so far this year!

Homemade Fest was great! Thanks to Mark Jones and Grant Martin for getting things together and thanks to all who attended and helped us tear down after the event. And thanks again to Kirkwood Parks for providing us with the site for FREE. Be sure to show up for one of the Kirkwood star parties to show your appreciation! The next event at Kirkwood is April 26.

Registration for MSRAL 2014 is open! Sign up by clicking the link on the SLAS home page or by clicking here: 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. If you have a paper to present or a speaker to suggest, contact myself or Mark Jones.

The next committee meeting is scheduled for **Sunday April 27th at 6:00 pm** at Young's Restaurant in Valley Park at 141 and Marshall just north of the railroad tracks. We need people to take over as committee heads and volunteers for various aspects about the convention such as registration, etc. Contact John Beaury if you are interested in volunteering. If you have a particular area you are interested in volunteering for (registration, etc) that would be useful, too. We will need lots of help when the convention comes.

A brochure for distribution is now available on the website. Feel free to give out copies wherever you can to announce the convention.

We actually had a terrific night for the total lunar eclipse on Tuesday morning. Bring your photos and movies to the meeting this week and we can have a slide show of photos on display before the meeting. It will be great to see what everyone has done!

Homemade Fest 2014

This year's Homemade Fest was held at the Kirkwood Community Center on Saturday March 22nd. This is the first time we have used the Kirkwood CC for this event. Around 25 members and guests were in attendance. Members brought pot-luck dishes and deserts. Attendees started arriving around 5pm and the food line was setup and ready by 6pm. At 7pm the presentations began.



Grant Martin was first up and presented his refurbishment of the SLAS lighted sign. Grant replaced the existing light sources with a hi-tech super bright LED system. Grant wowed the audience with the programmable lighting controls. The LED system can transition through all colors of the rainbow a real eye catcher.

Grant was able to update the SLAS sign for about \$50.



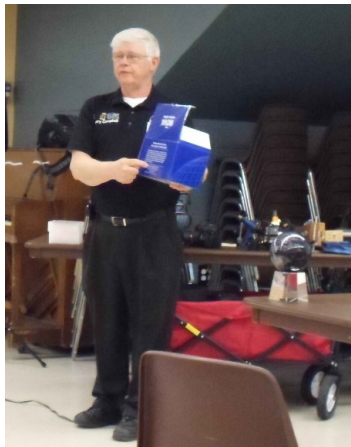
Jim Small was the second presenter and demonstrated his new pocket digital camera. This camera retails for \$450 and offers time exposures and the ability to program multiple exposures for time-lapse photography. Jim published some of his nighttime photos of the Planetarium in the March Event Horizon.

Mark Jones went next and presented the refurbishment of the SLAS 13" Red Coulter telescope. Mark was able to salvage parts off of another 13" telescope and complete the refurbishment for about \$100. This telescope will be added to our loaner scope program.

(Continued on page 3)



Next up was Jim Trull. Jim gave an enthusiastic recommendation for the book “Astronomy Hacks: Tips and Tools for Observing the Night Sky”, by Robert Bruce Thompson. This book is available in paperback on Amazon for \$25.



Larry Campbell then demonstrated the amazing Mova Globe. Many styles of globes are available, Larry’s version depicts the night sky. The price of this finely-crafted machine starts at \$150 and features the unique ability to use the Earth’s magnetic field and a solar powered motor to rotate without external power or mechanical parts.



Rick Menendez presented astrophotos taken by one of his college students. The photos were from a wide range of objects including the Pleiades, M33, and M42.

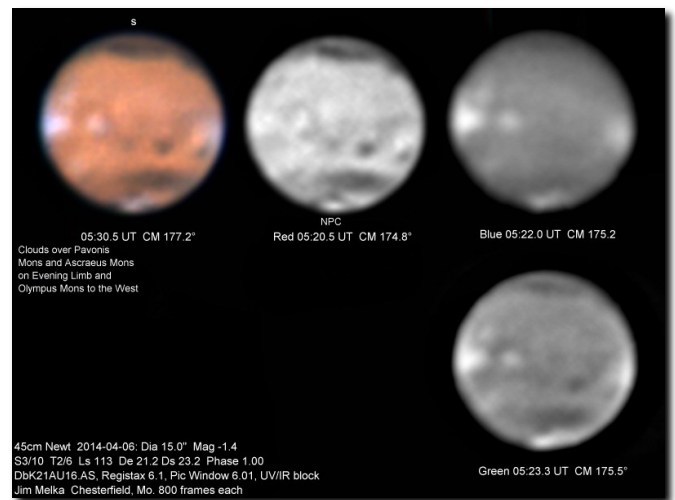
Thane Bopp brought a smorgasbord of astrogear including cameras of all sizes and prices ranges. Some had the ability to perform image processing

right in the camera, this allows the user to see an enhanced image without needing to go to a computer to process. Thane also presented and discussed the merits of several types of binoculars and tracking mounts.

Last up was Tom Nickelson who presented the progress made for the “Improvement in Handicapped Access to Public Telescope Viewing”. Tom is heading up the committee for the procurement and assembly of equipment. A 2013 Missouri Space Grant award of \$1200 grant is funding this project. Tom also displayed a new camera head donated to SLAS for the project. This advanced camera head, used in the security the business, has the ability to send video through Ethernet to a remote computer. This system coupled with the video eyepiece that the committee has purchased will allow less ambulatory persons the chance to see astronomical objects, even if not physically able reach a standard eyepiece.



The night concluded around 9:30 as members helped with cleanup. Thanks to all the presenters and helpers that made the 2014 Homemade Fest a success. Special thanks to Jim Small and Grant Martin for their help. Thanks also to Kirkwood Parks Department for providing the facility at no cost!



From Jim Melka: Recent full color and R, G & B filtered images on April 6th. Many afternoon clouds are visible over the Tharsis volcanic range on the left side of the color and blue filtered images of Mars. Ice from the North Polar Cap at bottom continues to sublimate (vaporize) in early summer and transfer to the South polar region. Mars imaging observers continue to record details in the shrinking North Polar Cap.

Messier Marathon at Broemmelseik by Grant Martin

All day long folks were attached to their computer screens looking for the smallest hint of good observing time via various weather services. Some said clear, others said cloudy. Others said "We don't have a clue".

The optimists looked for the good news and the pessimists just assumed bad.

I was convinced it was going to be good when it wasn't bad. I'd committed anyway so clear or not I was headed to Broemmelseik park to run interference for anyone who wanted to focus solely on the marathon.

I got to the park a half hour before sunset and found Carl Turek had his 12" setup with complete kit. Amy and Ed White were setting their 10" Dob up as well. I caught Amy in the middle of setting up her light blocking system that she debuted at last weeks Do it yourself meeting. Stacy Thater arrived on my heels and broke out his 6" Newtonian on alt/az mount. He said he hadn't used it in a long time and wanted to renew a long lost relationship.

As for me, well now I know how the women feel when they are trying to figure out what to wear to the party. With several Schmidts, refractors and reflectors of various sizes AND mounts of all classes, it took me a long time to figure out just WHAT to bring to the ball.



I had finally settled on an 8" Schmidt on a goto equatorial mount. I figured I'd already completed a manual marathon and if I was going to coral the general public, I might as well use something impressive. I also figured the clouds were going to roll in about midnight so I'd bail then so why take all the stuff needed to run the marathon - as the man said "We don't need no stinkin' plans".

7:30PM: All setup and nuttin' to look at...Most of the clouds had moved out by sunset and all that remained was that milky white soup that limits transparency and chews up seeing. The early evening objects like M32, 33, 34, 74, 77 and 110 were probably going to be lost in the twilight, mush

and low altitude atmosphere. In fact, end of March is too late to actually expect to complete the marathon with more than 104 objects BECAUSE these early evening objects (and a few early morning ones) are lost in the muck at twilight.

But hey, it's all fun anyway right? It wasn't until an hour after sunset (8:30PM) that M31 finally told the tale, Just barely observable, with averted vision, above the background light level. This is a mag 4.5 object folks. How ya gonna see a mag 10 objects like 32, 33, 34, 77 and 110 in this soup??? "Move along folks, nothing to see here"!

Anyway, things got rolling after 9PM and the hits just kept coming in. Larry Campbell and friend dropped in. Larry with his 12" motorized dob followed by David Lloyd with the big binsos.



The temp had dropped to 32F and folks were seriously bundled up. Larry's scope was making more noise than a dime store coffee grinder ;) Mine was a bit quieter. As I mentioned, I didn't bring any prepared viewing notes or charts - just a scope and laptop - sufficient if used properly. With digital charts, it's not all that difficult to determine which object is going to set soon. Nail those guys and you're home free. Start at the southern end of the meridian and work your way westward along the horizon to the north. Get the low objects and then repeat for a higher altitude. In retrospect, I should have made a quick list and checked off each object as I observed it. Instead, I relied on memory to handle which ones I viewed. So...does this mean I attempted a reverse "Memory Messier Marathon"? The real answer was to create a numerical list on the back of an envelope and check off the ones I'd seen. A review showed I did miss a few and that they were close to setting so off I went on a Missed Messier Marathon...

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By 10:20PM. Jupiter was high in the sky and a quick look showed several things: 1] Seeing had improved significantly, 2] The Pale Red Spot was in view and 3] It looked like a moon was going to be occulted. Good detail was seen on the disk at about 200x. A check of Starry Night Pro indicated the occultation of Io was going to take place at about 10:45. I set an alarm and proceeded to find a few more M objects.

At 10:40 I called out the situation with Io and one by one everyone came and took a look. Right on time, Larry said it winked out. Great. Back to the marathon...

For the next several hours it was look, talk and eat. A park ranger came by so I gave him a tour, Stacy stopped by and we chatted, Wander over and see how Carl, Amy and Larry



were doing - you know the drill...Interrupt a good thing with idle chit chat...

By 1:30AM all the easy stuff had been viewed to the west and it was time to go galaxy hopping through Virgo. There are so many galaxies in such a small area that you have to take your time so as not to confuse one galaxy with another. It's kind of like a speedbump in the sky. Too many observers have gotten bogged down and lost in this region. Once you get out, you have to really get busy to make up for lost time.

In this case, clouds added an extra incentive. There they were, low on the NW horizon a bit later than predicted but yet here they were.

Mars was up and the seeing was steady enough to show a LOT of detail at 222x.

By 2:30 the clouds were moving in fast. They were spread out so there were long lanes of clear sky to work in. Thus began the Messier Marathon Sprints - Swing briskly

through a lane of clear sky for whatever was there then over to a different lane. Rinse and repeat as they say. Temps had dropped to below freezing by 1:00 and now frost was clinging to EVERYTHING even the top of my hat (It was so bad Carl had frost on his logsheet cover). I had a bit of a dew problem so I cranked up the dewbuster and moved one of the heaters to full 12v. I never had a problem with dew afterwards.

This is pretty much how it went for the rest of the night. A quick look back at Mars revealed Syrtis Major, a bright Hellas basin and a very bright polar ice cap. By early twilight it was a mad dash to try to find those last remaining Messier objects. The session was closed with a look at a very bright crescent Venus.

Only Amy, Carl and I lasted the night. I missed M30,32,33,74,77,79 and 110. I think Amy and Carl also busted the magical 100 line. All in all, a whole lotta fun and not too bad for no plan.

Grant Martin

Danville Messier Marathon
Observing Report March 29-30, 2014
Oh what a Night!
by Bill Breedon

The SLAS Messier Marathon at Danville was one of the best astronomy nights I have attended in what seems like a very long time! The skies cleared up, seemingly at the last minute after an overcast day, the temperatures were relatively mild for March (lower 50's dropping to the lower 40's later on), and the transparency was spectacular. I stayed until about midnight, having planned to complete a Messier half-marathon. Cook Feldman had set up his 8-inch Dobsonian, and I set up my 8-inch Meade LX-90 SCT. Cook and I decided to march through the Messier Marathon objects more or less at the same time, so we could comment on views and share our experiences on this terrific clear night.



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As it got dark, the skies were nice and clear, and Jupiter was up. I just had to take a look – it was big and bright, and all four Galilean moons were visible.

The first six objects on the Messier Marathon list (M77, M74, M33, M31, M32, and M110) were just too low in the west and lost in twilight. Since I had planned to do a half-marathon anyway, I wasn't worried about these objects – I will catch them in the other half-marathon in September.

I started with the seventh and eighth objects on the Messier Marathon list, M52 and M103, a pair of 7th magnitude open clusters in Cassiopeia. These objects appeared big, bright, and absolutely stunning in my 19mm Panoptic eyepiece! The fact that I had not observed any celestial objects at a dark sky site in about six months undoubtedly contributed to my enthusiasm at the sight of M52 and M103.

After M103, I began to observe the Messier objects in true Marathon fashion: Choose object from list, point telescope, observe and enjoy, then on to the next object. M76, M34, M45, beautiful! Each object appeared more awesome than the last. I did observe M45 (the Pleiades) through my finder scope instead of the eyepiece, since it is such a large object.



Next, I was off to Orion and Lepus, M79, M42, M43, and M78. M42 was absolutely spectacular. I cannot remember ever seeing it look this good. The trapezium was tack-sharp, and the dust cloud stretched across my 19mm eyepiece's entire 36 arc-minute field of view.

Off to Taurus, Gemini, and Auriga. M1, the Crab Nebula, was bigger and brighter than I had remembered. I have observed this supernova remnant in the past, but I have always had trouble seeing it. Not tonight! It was brighter and quite obvious in my 19mm Panoptic. After observing M1 so easily, I decided to just leave the 19mm eyepiece in the telescope for my entire observing run tonight. The next open clusters, M35, M37, M36, and M38 were spectacular, especially M35 and M37!

Next I observed the series of Messier open clusters in Canis Major, Puppis, Monoceros, Hydra, and Cancer: M41, M93, M47, M46, M50, M48, M44, and M67. Awesome.

Now I am heading into the realm of Leo galaxies, and a pair in Ursa Major. The galaxies M95, M96, M105, M65, and M66 are all quite faint, but since the transparency was so good, they were quite easy to see. M81 and M82, forever favorite galaxies in Ursa Major, were just a little too far apart to see in my 19mm in the same field, but, they were fabulous!



The next four objects in Ursa Major include the Owl Nebula (M97), two galaxies (M108 and M109), and the double star M40. I observed all of these easily. The Owl Nebula was quite small, and I could not see the owl's "eyes."

I was now in full Marathon Mode, marching through the Messier catalog with confidence and excitement. Messier Marathons are not favored by all amateur astronomers – some say that moving through the entire catalog in one night (or half the catalog in half of a night as I am doing) does not allow you to stop long enough at each object to enjoy it. This is true, however (and this is a big however), I think Messier Marathons lend an excitement to astronomy that may attract people to the hobby. Everyone loves a challenge with a nice dose of adrenaline, and I must say that I had lots of energy during this Marathon! Whether or not my energy level was good because of the Marathon, or simply because I was happy to be outside observing after such a long (and horrible) winter, I may never really know. But the Messier Marathon is fun, and isn't that the point?

Moving on, I next observed a series of galaxies in Canes Venatici, Ursa Major, and Draco: M106, M94, M63, M51 (the Whirlpool Galaxy), M101, and the mystery object M102 (NGC5866). M102 is sort of an enigma because Charles Messier's original catalog had a mistake in it – no galaxy existed at Messier's listed coordinates. NGC5866, a 10th-magnitude galaxy in Draco, "seemed" to match Messier's description, so it has been accepted as a stand-in

STARFLEET COMMAND
MISSION UPDATES FOR APRIL 2014

EXTRA SOLAR PLANETS COUNT

The Extra Solar Planets Encyclopedia: 1780 www.exoplanet.eu

The NASA Exoplanet Archive: 1693 www.planetquest.jpl.nasa.gov

Exoplanet Orbit Database: 1490 www.exoplanets.org

Arecibo-The Exoplanets Catalog: 1780 www.phl.upr.edu/projects/habitable-exoplanets-catalog

Open Exoplanet Catalog: 1773 www.openexoplanetcatalogue.com

FUTURE MISSIONS

To have your name place on the OSIRIS-Rex mission:

www.planetary.org/get-involved/messages

Last Day:

Sept 2014

SPACE-X DRAGON

DESIGNATION LAUNCH DATE

CRS-3 14-Apr-2014 Delayed

CYGNUS

DESIGNATION LAUNCH DATE

CRS-2 1-May-2014

ESA AUTOMATED TRANSFER VEHICLE

DESIGNATION LAUNCH DATE

ATV-005: Georges Lematre June 2014

INTERNATIONAL SPACE STATION CREWS

EXPEDITION 39: MISSION STARTED: 10 March 2014

CREW MEMBERS	COUNTRY	UP/DOWN	STARTED
Koichi Wakata (CDR)	JAXA	Soyuz: TMA-11M	6-Nov-2013
Mikhail Tyurin	Russia	Soyuz: TMA-11M	6-Nov-2013
Richard A Mastracchio	USA	Soyuz: TMA-11M	6-Nov-2013
Aleksandr Skvortsov	Russia	Soyuz: TMA-12M	25-Mar-2014
Oleg Artemyev	Russia	Soyuz: TMA-12M	25-Mar-2014
Steven R Swanson	USA	Soyuz: TMA-12M	25-Mar-2014

Astronaut Scott Kelly and Cosmonaut Mikhail Kornienko will launch on 28 March 2015 on board TMA-16M for a one year long mission to the ISS.

NOTES SECTION

MESSENGER

*18 Dec 2013: MESSENGER 1000 Earth days in orbit around Mercury.

* 06 February 2014: MESSENGER 200,000 Orbital Images of Mercury.

ROSETTA*

May 2014: The Rosetta spacecraft will enter into a slow orbit around the comet and gradually slowdown in preparation for releasing a Lander that will make contact with the comet itself. The Lander, named Philae, will approach Churyumov-Gerasimenko and on contact with the surface, two harpoons will be fired into the comet to secure the lander. additional drills are used to further secure the lander on the comet. Once attached to the comet, expected to take place in Nov 2014, the lander will begin its science mission.

LADEE

*04 April 2018 NASA announces it will end the mission by crashing the probe into the Moon in late April 2014.

INTERNATIONAL SPACE STATION

*13 March 2014 TMA-22-M raised the orbit of ISS by 1 mile.

USAF ORBITAL TEST VEHICLE OTV 3 "Vehicle 1"

* 26 March 2014 The X-37B space plane currently in orbit in flying the Orbital Test Vehicle 3 (OTV-3) mission, has surpassed the Flight Duration Record of OTV 2.



Mark Jones and Larry Campbell draw a crowd for a view of Jupiter and the Moon between clouds at Parkway North.



Above: Parents and students enjoy a view of the Moon at the Old Bonnehomme Science Night.

Below: John Beaury discusses telescopes as a view of the Moon is available.



St. Louis Astronomical Society
Balance Sheet
 As of March 31, 2014

	Dec 31, 13	Mar 31, 14
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	3,263.28	3,557.21
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	3,358.01
YMCA Trout Lodge Escrow	877.87	877.87
Total Checking/Savings	27,563.13	27,833.32
Other Current Assets		
Inventory Asset	1,707.15	1,707.15
Investment in Mid-States 2014	2,000.00	2,000.00
Undeposited Funds	0.00	(25.00)
Total Other Current Assets	3,707.15	3,682.15
Total Current Assets	31,270.28	31,515.47
Fixed Assets		
Accum Depr - Office Equip	(216.65)	(216.65)
Office Equipment	216.65	216.65
Total Fixed Assets	0.00	0.00
TOTAL ASSETS	31,270.28	31,515.47
LIABILITIES & EQUITY		
Liabilities		
Current Liabilities		
Accounts Payable		
Accounts Payable	40.99	8.12
Total Accounts Payable	40.99	8.12
Total Current Liabilities	40.99	8.12
Total Liabilities	40.99	8.12
Equity		
Opening Bal Equity	8,137.66	8,137.66
Retained Earnings	19,214.15	23,091.63
Net Income	3,877.48	278.06
Total Equity	31,229.29	31,507.35
TOTAL LIABILITIES & EQUITY	31,270.28	31,515.47

7:02 PM
 04/07/14
 Accrual Basis

St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
 January through March 2014

	Jan - Mar 14	Budget	\$ Over Budget
Ordinary Income/Expense			
Income			
Magazine Subscription			
Astronomy Magazine Sales	170.00	816.00	(646.00)
Sky & Telescope Sales	230.65	955.55	(724.90)
Total Magazine Subscription	400.65	1,771.55	(1,370.90)
Membership Dues	1,010.00	1,190.00	(180.00)
Total Income	1,410.65	2,961.55	(1,550.90)
Cost of Goods Sold			
Magazine Subscriptions			
Astronomy Magazine Cost	102.00	816.00	(714.00)
Sky & Telescope Cost	198.75	955.55	(756.80)
Total Magazine Subscriptions	300.75	1,771.55	(1,470.80)
Total COGS	300.75	1,771.55	(1,470.80)
Gross Profit	1,109.90	1,190.00	(80.10)
Expense			
1-Programs & Events			
Home Made Fest	54.99	100.00	(45.01)
Meeting Expenses			
Meeting Refreshments		112.50	(112.50)
Meeting Speaker Fees		62.50	(62.50)
Total Meeting Expenses		175.00	(175.00)
Membership Initiatives	30.00	131.25	(101.25)
Total 1-Programs & Events	84.99	408.25	(321.26)
2-Newsletter			
Newsletter Postage		37.50	(37.50)
Newsletter Printing	177.22	33.75	143.47
Total 2-Newsletter	177.22	71.25	105.97
3-Library expense	88.62	75.00	13.62
5-Loaner Scopes	10.81	75.00	(64.19)
6-Brochures	43.69	62.50	(18.81)
7-Insurance	380.00		
8-Website	113.88	108.00	5.88
9-Administrative Expenses			
Office Supplies		60.00	(60.00)
Paypal Fees	17.22	9.00	8.22
Postage	39.20	37.50	1.70
Reconciliation Discrepancies	32.95		
Total 9-Administrative Expenses	99.37	106.50	(17.13)
Total Expense	988.58	904.50	84.08
Net Ordinary Income	121.32	285.50	(164.18)
Other Income/Expense			
Other Income			
Donations			
SLAS Club Members	6.33		
Donations - Other	150.00		
Total Donations	156.33		
Interest Income	0.41	25.00	(24.59)
Total Other Income	156.74	25.00	131.74
Net Other Income	156.74	25.00	131.74
Net Income	278.06	310.50	(32.44)



Lunar Eclipse photos from April 15, 2014 taken by Grant Martin with a Canon S100 camera.

SAINT LOUIS ASTRONOMICAL SOCIETY

MINUTES OF EXECUTIVE BOARD MEETING:

February 13, 2014

Opening Activities Meeting called to order 7:15pm

Attendees: Jim Small, Grant Martin, Brad Waller, Mark Jones, Tom Nickelson

February meeting minutes reviewed. Motion to approve by the minutes by Brad, seconded by Tom. Minutes approved

2. External Business

SLSC: March 7 – First Friday theme is Titans of the Ice Age. Schedule: 6 to 9pm Experience Flight: Test out our flight simulators – \$5 and \$6, 6 to 9pm Public Telescope Viewing with SLAS, 7pm Planetarium Show: *The Sky Tonight* (Star Bay), 8:30pm Play Raptor Tag! (Star Bay), 9pm Screening of *Land of the Lost* (1974) episodes (Star Bay), 10pm *Encino Man* – Free! Seating is limited and tickets, available at the box office, are required.

SLSC: April 4 – First Friday – Theme: Robots!

Homemade Fest: The Homemade Fest is set for Kirkwood Community Center, room 301 from 5-10 on Saturday, March 22nd. Check with Mark if you have something to present at the event. We need to pick up the projector and screen for any computer presentations. Door prizes have been obtained.

Next board meeting: 4/10.

Board meeting dates for the year are confirmed from the YMCA: 5/8, 6/12, 7/10, 8/7, 9/11, 10/9, 11/6, 12/11.

3. Director Reports:

President – Jim S **MSRAL 2014** A letter was composed and sent to all presidents and ALCORS in the region and other people who are on the list to be contacted. It was also sent to people who signed up at ALCON last year and AL members at large. A PowerPoint was also uploaded to the website for presenting info about the convention to other clubs. Contact was made with Creve Coeur Camera about sponsoring the convention.

SLAS has been invited to have a booth at an Expo held at Creve Coeur Camera on May 10. It will be a good opportunity for SLAS to connect with a lot of people and invite them to our conference. It is the same day as Astronomy Day at the Science Center.

Vice President – Bill Biermann

Speakers: March meeting: Dr. Matthias Beilicke, Probing the High Energy Universe; April meeting: Bob Criss - Rotational Dynamics of Planets, Stars and Galaxies; May meeting: Pamela Gay - Topic TBD

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 – Treasurer's reports were sent out to board. Annual tax return was sent to the IRS for 2013. Tax exemption certificate needs to be renewed as it expires mid May. We should be getting the renewal notice soon on our insurance. Rhonda will be on the lookout.

Hospitality – Grant M

No report

Board member at large reports

Larry Campbell no report

Tom Nickelson: Space Grant for people with disabilities. 1st round of equipment has arrived except for the telescope optical tube assembly. It is on backorder.

Brad Waller: Brad has volunteered to produce monthly column for the Event Horizon on space missions

4. Committee Reports:

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 – Sky and Telescope 2013 Compilation DVD has arrived.

Website – MSRAL page and registration form is up.

Night Sky Network – Pins were presented at the Feb meeting. Pins for absentees will be presented at the March meeting.

Dark Site – Dark Site Observing Dates are 3/1, 3/29 (Messier Marathon), March 29th Messier Marathon, April 26, May 3, May 24 (Memorial Day weekend), May 31 (new moon), June 28, July 26, Aug 30, Sep 27, Oct 25

Loaner Equipment – 13" Red Coulter refurbishment almost done. Will bring to Homemade Fest

Observing Programs – Messier Marathon: A joint SLAS-ASEM Messier Marathon is being planned for March 29 at Broemmelsiek Park.

Star Parties: Some star parties are listed below. The March 8 event will be a dedicated event in honor of John Dobson and sidewalk astronomy! It is a national (international) event offered up in his memory by the Sidewalk Astronomers. We already happened to have the Kirkwood event scheduled.

Details for the next month's confirmed events below.

March 7, 2014 (FRI) McDonnell Planetarium / SLSC PTV

March 8, 2014 (SAT) Kirkwood Park

March 14, 2014 (FRI) Creve Coeur Star Gazing

March 15, 2014 Camp Cedarledge

March 27, 2014 Rockwood Valley Middle School

March 29, 2014 Messier marathon

April 4, 2014 Public Telescope Viewing

April 7, 2014 Edward Jones YMCA

April 9, 2014 Francis Park

April 11, 2014 Bonhomme School

April 14, 2014 Mallinckrodt Career Night

April 26, 2014 Snores and Smores Camp Out Kirkwood Park

5. Old Business None

6. New Business

Grant Martin- Grant has extra copy of the book: "Lost Art of Finding Your Way". This could be added to the SLAS library if budget is available

Grant Martin- Jerry Loethen and family are back in town!!

7. Closing Activities

Motion by Brad to adjourn, Tom seconded motion, meeting was adjourned 8:45pm

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*

5/8/2014
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

April 26
May 3
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

May 7 (7 day old Moon) (1st Wed.)
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

5/5/2014
6/2/2014
6/30/2014 (two in June is because of Moon timing)
8/14/2014

Pattonville Observatory Open House Dates

April 25, 2014 Friday 9:00-11:00 p.m. Public Program
Jupiter, Saturn, Mars, M104 (Sombrero Galaxy), M96, M44, Double Stars and various constellations
May 2, 2014 Friday 9:00-11:00 p.m. Public Program
Jupiter, Saturn, Mars, M104, M96 and globular cluster of M3 and M5, open cluster of M44
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

April

18 FRI
26 SAT
26 SAT

SLAS Regular Meeting
SLAS Dark Sky Observing
Kirkwood Snores and S'mores
Camp Out

May

2 FRI
3 SAT
6 Tue
5 MON
7 WED
8 THUR
8 THUR
9 FRI
10 SAT
10 SAT
10 SAT
15 Thur
16 FRI
17 Sat
24 SAT
31 SAT

SLSC Public Telescope Viewing
SLAS Dark Sky Observing
Children's Hospital
Edward Jones YMCA
Francis Park
SLAS Board Meeting
Manchester Parks
Stargazing at the Arch
Astronomy Day
Creve Coeur Camera Expo
Kirkwood Park
MICDS Adventure Night
SLAS Regular Meeting
Night Skies Over Babler
SLAS Dark Sky Observing
SLAS Dark Sky
Observing

June

2 Mon
3 Tue
4 Wed
6 Fri
JUNE 6-8
13 Fri
19 Thur
21 Sat

30 Mon

Edward Jones YMCA
Children's Hospital
Francis Park
SLSC Public Telescope Viewing
MSRAL Convention
Stargazing at the Gateway Arch
Maplewood Public Library
Great American Backyard Campout
Des Peres Park
Edward Jones YMCA

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

President *Jim Small* 314-307-0692
president at slasonline.org**Vice President** *Bill Biermann* 314-596-6738
vicepresident at slasonline.org**Secretary** *Mark Jones* 636-394-2342
secretary at slasonline.org**Treasurer** *Rhonda Whelan, Cook Feldman, Don Ficken (membership)* 636-225-0269
treasurer at slasonline.org**Hospitality** *Grant Martin*
hospitality at slasonline.org**Board Members at Large:***Tom Nickelson*
board14 at slasonline.org
Larry Campbell 636-244-2867
board15 at slasonline.org
Bradley Waller 314-481-7250
board16 at slasonline.org**ALCOR** *Rhonda Whelan* 314-750-0262
(Astronomical League Correspondent)
treasurer at slasonline.org**MSRAL Rep.** *Jim Small* 314-909-7211
msral_rep at astroleague.org**COMMITTEE CHAIRS****Membership** *Don Ficken* 636-225-0269
membership at slasonline.org**Publicity** *Rich Heuermann* 314-962-9231
publicity at slasonline.org**'SLASdialogs' Moderator** *Mark Jones, Rhonda Whelan*
dialogsmoderator at yahoo.com**Webmaster** *Jim Small* 314-909-7211
webmaster at slasonline.org**Newsletter Ed.** *Jim Small* 314-909-7211
newsletter at slasonline.org**Loaner Equip.** *Greg Gaines* 314-277-3082
loaner at slasonline.org**Merchandise** *Grant Martin*
merchandise at slasonline.org**Librarian** *Jim Small* 314-909-7211
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telescope at slasonline.org

Devoted to the Interest and Advancement of the Science of Astronomy

ST. LOUIS ASTRONOMICAL SOCIETY

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

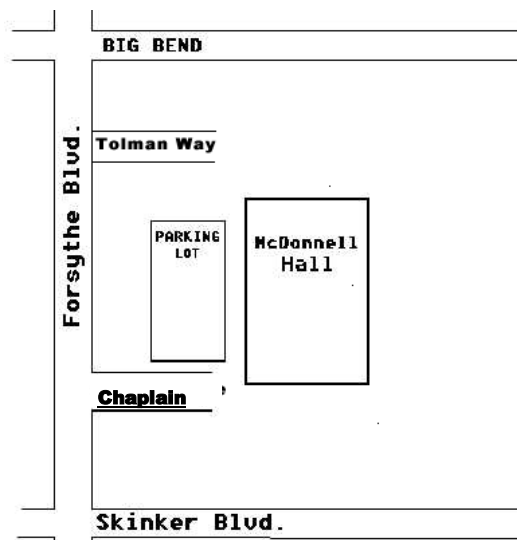


Who We Are and What We Do

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
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