

THE EVENT HORIZON



ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

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The Mars One Project: Establishing A Colony On Mars by Ms. Maggie Duckworth Mars One

Ms. Maggie Duckworth will be featured at the November meeting of the St. Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, November 18, in McDonnell Hall, Room 162, on the Washington University campus, Saint Louis, MO 63130. McDonnell Hall is accessible from Forsyth Boulevard via Tolman Way. Yellow zone and street parking are available to the audience.

Mars One is a privately funded organization dedicated to placing a human settlement on Mars by 2030. Over 20,000 persons applied in 2013 for the 24 Mars colonist positions planned for the initial colony. Following the recent conclusion of the second phase of selection, Ms. Duckworth is one of the 100 applicants remaining. She will explain why humans have not yet set foot on Mars and how Mars One plans to establish the first colony. She will discuss the challenges that future Martians will face, the mission cost, and whether the first humans on the red planet

will be sponsored by government agency or private commercial enterprise. She will also talk about her own experiences with Mars One selection and training, and what it might be like to live on another planet.

Maggie Duckworth followed her award of a degree in Electrical Engineering by establishing a business in costuming and distribution of the largest gauge zippers in the world. As she proceeds with the astronaut selection process, she continues to publicize the Mars One project, giving presentations at colleges, schools, conventions, and societies, and being interviewed on multiple media platforms.

Upcoming Meetings:

December - Michael Ogilvie - TBA
2017

January - Peter Plavchan, PhD - The Golden Age of Exoplanet Discovery - MSU

February - Pamela Gay, PhD - Super-Secret Squirrel Stuff - SIU-E

March - Christine Floss, PhD - TBA Wash U

April - Kevin Evans, PhD - Weaubleau Impact Structure - MSU

May - Kara Kundert - Cosmic Epoch of Re-ionization "Skype" - UC Berkeley

Mid States Region



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A RAFFLE FOR

Dr Neil deGrasse Tyson

Peabody Opera House

18 May 2017 @ 7:30pm



For SLAS members only

The raffle is for TWO tickets to this event.

The drawing will be held at the April SLAS monthly meeting. You do not need to be in attendance to win.

Contact person:

Bradley R Waller

SLAS VP

bwaller@stlouisco.com

314-481-7250

Presidents Corner - Jim Small

It's almost the end of the year which means we will be sending in the list of volunteers who have been to five or more outreach events to Night Sky Network for their outreach pins. It might not sound like a big deal... it's just a pin after all, but it is a big deal. It represents a dedication to the Society and to bringing astronomy to the public; one of our missions! Even if you don't qualify for a pin you still have helped us bring astronomy to all those who want to find out; those who want to learn.

Volunteers are the key to non-profits like ours and our volunteers deserve a big "Thank you" for all the work they have done! Without volunteers, our organization simply wouldn't exist... the Library Telescope Program wouldn't exist... the Eclipse Task Force wouldn't exist... and people might not be targeting the St. Louis area for conferences in our town... And most important, the people in the St. Louis area who want to find out more about astronomy and science and who want to be amazed by what we can show and tell them about and help them understand would not be exposed to that kind of experience.

Not all people want to be volunteers for outreach or are interested in telescopes themselves. They just want to learn.

I hope in the coming years we can not only feed the outreach program with volunteers, but I hope we find ourselves benefitting any member who simply wants to learn about astronomy and science. We should continue trying to find ways to draw anyone in who wants to be there to discover the wonder and science of astronomy.

Thanks once again for all the help!

Attendance Prizes!

**Left:
Summer Solstice**

Mark Fedde "An Astronaut's Guide to Life on Earth"

**Right:
Autumnal Equinox**

Eric Kovach "How I Killed Pluto and Why it had it Coming"



Volunteer Hours Through November, 2016

Through early November, SLAS members have logged 1538 hours for 150 NSN outreach events!

We have exceeded our 2015 totals of 1396 hours for 91 events! And the year is not over yet!

Members with 5 or more events can qualify for the Night Sky Network pin. Check NSN for opportunities and sign up today. If you are a member with 4 or less events logged this year there is still time to volunteer. See page 10!

Thank you to all our volunteers!

Member Name	# of events	# of Hrs
Donald Ficken	89 Events;	220.8 Hrs
Cook Feldman	50 Events;	187.6 Hrs
Larry Campbell	35 Events;	98 Hrs
John Beaury	32 Events;	125.5 Hrs
Rich Heuermann	30 Events;	98.5 Hrs
Mark Jones	29 Events;	96 Hrs
Frank Mack	22 Events;	55.3 Hrs
James Small	21 Events;	68.5 Hrs
Rick Menendez	16 Events;	49.3 Hrs
Sharon Bertram	13 Events;	42.5 Hrs
Richard Fefferman	11 Events;	27.5 Hrs
Richard Jennings	11 Events;	31.5 Hrs
Bill Biermann	9 Events;	19.6 Hrs
William Neubert	8 Events;	27.3 Hrs
Bill Breeden	7 Events;	21.5 Hrs
Jim Trull	7 Events;	23 Hrs
Robert Drzymala	6 Events;	21.5 Hrs
William Winningham	6 Events;	21.5 Hrs
Jeffrey Strauss	5 Events;	17 Hrs
Rita Breeden	5 Events;	15.5 Hrs
Ann Trull	4 Events;	12.5 Hrs

Doug Blum	4 Events;	10.5 Hrs
Edward Frey	4 Events;	16 Hrs
Michelle Birch	4 Events;	23 Hrs
Benjamin Winningham	3 Events;	11 Hrs
Gregory Rigelman	3 Events;	11.5 Hrs
Josh Zitko	3 Events;	8.5 Hrs
Wayne Clark	3 Events;	14 Hrs
Bradley Waller	2Events;	7 Hrs
Dale Engelbrecht	2 Events;	7.5 Hrs
Donald Snyder	2 Events;	4.3 Hrs
Gaylene Engelbrecht	2 Events;	7.5 Hrs
Gregg Ruppel	2 Events;	9 Hrs
Gregory Gaines	2 Events;	9 Hrs
Lynn Fee	2 Events;	9.5 Hrs
Raymond Mueller	2 Events;	6 Hrs
Robert Beebe	2 Events;	10.5 Hrs
Thomas Schloemann	2 Events;	12.5 Hrs
Alan Sapia	1 Events;	7 Hrs
Brent Buch	1 Events;	4.5 Hrs
Brian Mills	1 Events;	6 Hrs
Cathy Hooper	1 Events;	6 Hrs
Gary Holt	1 Events;	7 Hrs
Gerald Hutchins	1 Events;	7 Hrs
Gregory Pernoud	1 Events;	2.5 Hrs
James Griffith	1 Events;	2.5 Hrs
JD Henson	1 Events;	2.5 Hrs
Joseph Schober	1 Events;	2.5 Hrs
Lee Halbeck	1 Events;	3 Hrs
Mark Fedde	1 Events;	4 Hrs
Marlene Bopp	1 Events;	8 Hrs
Michael Malolepszy	1 Events;	2 Hrs
Nancy Clark	1 Events;	6 Hrs
Randy Gettman	1 Events;	1.5 Hrs
Renee Mettle	1 Events;	7 Hrs
Timothy Hulla	1 Events;	1.5 Hrs

ST. LOUIS ASTRONOMICAL SOCIETY							
PRELIMINARY OPERATING BUDGET - 2017							
	Actual	Budget	Projection		Budget		
	Year to Date	Year to Date	Sept-16 to	Year to date	Annual	Annual	Annual
	Aug-16	Aug-16	Dec-16	Dec-16	2015	2016	2017
Income							
Magazine Subscription							
Total Magazine Subscription	\$ 896.13	\$ 1,231.95	\$ 833.20	\$ 2,517.18	\$ 2,034.10	\$ 1,734.40	\$ 952.50
Membership Dues	\$ 2,380.00	\$ 2,545.00	\$ 895.00	\$ 3,275.00	\$ 3,440.00	\$ 3,725.00	\$ 3,600.00
Merchandise Sales	106.00	-	-	-	-	-	-
Total Income	\$ 3,382.13	\$ 3,776.95	\$ 1,728.20	\$ 5,792.18	\$ 5,474.10	\$ 5,459.40	\$ 4,552.50
Cost of Goods Sold							
Magazine Subscriptions							
Total Magazine Subscriptions	\$ 871.80	\$ 1,231.95	\$ 802.15	\$ 1,673.95	\$ 2,034.10	\$ 1,734.40	\$ 952.50
Merchandise	(62.50)	45.00					
Total Cost of Goods Sold	\$ 809.30	\$ 1,276.95	\$ 802.15	\$ 1,673.95	\$ 2,034.10	\$ 1,734.40	\$ 952.50
Gross Profit	\$ 2,572.83	\$ 2,500.00	\$ 926.05	\$ 4,118.23	\$ 3,440.00	\$ 3,725.00	\$ 3,600.00
Operating Expense							
Programs & Events							
Home Made Fest	90.64	100.00	-	90.64	100.00	100.00	100.00
Star BBQ Expense	171.99	175.00	-	171.99	175.00	175.00	175.00
Library Scope Program Escrow	-	200.00	-	-	600.00	200.00	200.00
Astronomy Day/Outreach							300.00
Eclipse Workshop Dues	-	200.00	-	-	200.00	200.00	
2017 Eclipse Committee	-				200.00	-	-
Meeting Expenses							
Meeting Refreshments	171.09	233.33	60.00	231.09	450.00	350.00	350.00
Meeting Speaker Fees	203.10	166.66	60.00	263.10	250.00	250.00	600.00
Total Meeting Expenses	\$ 374.19	\$ 399.99	\$ 120.00	\$ 494.19	\$ 700.00	\$ 600.00	\$ 950.00
Membership Initiatives (excludes "profits")	\$ 16.20	\$ 133.34	\$ 80.00	\$ 96.20	\$ 200.00	\$ 200.00	\$ 200.00
Merchandise			45.00	45.00	\$ 120.00	45.00	45.00
Membership Recognition	179.36	173.33	150.00	329.36	200.00	260.00	300.00
Programs & Events	\$ 832.38	\$ 1,381.66	\$ 395.00	\$ 1,227.38	\$ 2,495.00	\$ 1,780.00	\$ 2,270.00
Newsletter Postage	\$ 96.40	\$ 133.34	\$ 20.00	\$ 116.40	\$ 180.00	\$ 200.00	\$ 175.00
Total Newsletter	\$ 96.40	\$ 133.34	\$ 20.00	\$ 116.40	\$ 180.00	\$ 200.00	\$ 175.00
Library expense	\$ -	\$ 66.66	\$ 100.00	\$ 100.00	\$ 300.00	\$ 100.00	\$ 300.00
Astronomical League Dues	700.00	695.00	-	700.00	650.00	695.00	670.00
Loaner Scopes**	-	25.00	-	-	200.00	50.00	50.00
Insurance	380.00	380.00	-	380.00	380.00	380.00	380.00
Website	155.40	150.00	-	155.40	135.00	150.00	170.00
Administrative Expenses							
Corporate Filings	21.25	20.00	-	21.25	-	20.00	-
Office Supplies	-	110.00	10.00	10.00	165.00	165.00	100.00
Banking Fees							25.00
PayPal Fees	15.32	26.66	10.00	25.32	40.00	40.00	40.00
Postage	9.80	60.00	30.00	39.80	75.00	90.00	90.00
Printing / Copying Expense (combined 2015)	289.97	743.34	150.00	439.97	888.00	1,115.00	1,370.00
Administrative Expenses	\$ 336.34	\$ 960.00	\$ 200.00	\$ 536.34	\$ 1,168.00	\$ 1,430.00	\$ 1,625.00
Total Operating Expense	\$ 2,500.52	\$ 3,791.66	\$ 715.00	\$ 3,215.52	\$ 5,508.00	\$ 4,785.00	\$ 5,640.00
Net Income/(Loss) From Operations	\$ 72.31	\$ (1,291.66)	\$ 211.05	\$ 902.71	\$ (2,068.00)	\$ (1,060.00)	\$ (2,040.00)

ST. LOUIS ASTRONOMICAL SOCIETY
PRELIMINARY OPERATING BUDGET - 2017

	Actual		Budget		Projection		Budget			
	Year to Date	Year to Date	Sept-16 to	Year to date	Annual	Annual	Annual			
	Aug-16	Aug-16	Dec-16	Dec-16	2015	2016	2017			
Other Income / Expense										
Other Income										
Donations										
SLAS Club Members	0.05			0.05	-	-	-			
Donations - Other	583.00		325.00	908.00	-	-	-			
Total Donations	\$ 583.05		\$ 325.00	\$ 908.05	\$ -	\$ -	\$ -			
Interest Income	\$ 34.18	\$ 75.00	\$ 11.39	\$ 45.57	\$ 100.00	\$ 100.00	\$ 100.00			
Non-Operating Income (Astro Mag Award)	2,500.00			2,500.00	-	-	-			
Total Other Income	\$ 3,117.23	\$ 75.00	\$ 661.39	\$ 3,453.62	\$ 100.00	\$ 100.00	\$ 100.00			
Other Expense										
Physical Inventory Adjustment	\$ 203.69			\$ 203.69	\$ -	\$ -	\$ -			
Astro Mag Award Disbursements	1,756.47		743.53	2,500.00				\$ 800.00	\$ 1,000.00	
2017 Eclipse Escrow Funding								\$ 1,000.00	1,000.00	
LTP Escrow Funding										
Total Other Expense	\$ 1,960.16	\$ -	\$ 743.53	\$ 2,703.69	\$ -	\$ 1,800.00	\$ 2,000.00			
Net Other Income / (Expense)	\$ 1,157.07	\$ 75.00	\$ (82.14)	\$ 749.93	\$ 100.00	\$ (1,700.00)	\$ (1,900.00)			
Net Income / (Loss)***	\$ 1,229.38	\$ (1,216.66)	\$ 128.91	\$ 1,652.64	\$ (1,968.00)	\$ (2,760.00)	\$ (3,940.00)			
Required versus Discretionary Spending										
Gross Profit	\$ 2,572.83	\$ 2,500.00	\$ 926.05	\$ 4,118.23	\$ 3,440.00	\$ 3,725.00	\$ 3,700.00			
Required Expenses										
Newsletter Postage	\$ 96.40	\$ 133.34	\$ 40.00	\$ 136.40	\$ 180.00	\$ 200.00	\$ 175.00			
Astronomical League Dues	700.00	695.00	-	700.00	650.00	695.00	670.00			
Insurance	380.00	380.00	-	380.00	380.00	380.00	380.00			
Website	155.40	150.00	-	155.40	135.00	150.00	170.00			
Corporate Filings	21.25	20.00	-	21.25	-	20.00	-			
Office Supplies	-	110.00	-	-	165.00	165.00	100.00			
Banking Fees	-	-	-	-	-	-	25.00			
PayPal Fees	15.32	26.66	15.00	30.32	40.00	40.00	40.00			
Postage	9.80	60.00	20.00		75.00	90.00	90.00			
Printing / Copying Expense	289.97	743.34	500.00	789.97	888.00	1,115.00	1,370.00			
	\$ 1,668.14	\$ 2,318.34	\$ 575.00	\$ 2,213.34	\$ 2,513.00	\$ 2,855.00	\$ 3,020.00			
Balance for Discretionary Items	\$ 904.69	\$ 181.66	\$ 351.05	\$ 1,904.89	\$ 927.00	\$ 870.00	\$ 680.00			
Discretionary Spending										
Home Made Fest	90.64	100.00	-	90.64	100.00	100.00	100.00			
Meeting Refreshments	171.09	233.33	80.00	251.09	450.00	350.00	350.00			
Meeting Speaker Fees	203.10	166.66	46.90	250.00	250.00	250.00	600.00			
Membership Initiatives (excludes "profits")	16.20	133.34	183.80	200.00	200.00	200.00	200.00			
Merchandise	-	-	45.00	45.00	120.00	45.00	45.00			
Membership Recognition	179.36	173.33	70.00	249.36	200.00	260.00	300.00			
Astronomy Day/Outreach	-	-	-	-	-	-	300.00			
Star BBQ Expense	171.99	175.00	-	171.99	175.00	175.00	175.00			
Library expense	-	66.66	100.00	100.00	300.00	100.00	300.00			
Loaner Scopes	-	25.00	-	-	200.00	50.00	50.00			
Library Scope Program Escrow	-	200.00	-	-	600.00	200.00	200.00			
Eclipse Workshop Dues	-	200.00	-	-	200.00	200.00	-			
2017 Eclipse Committee	-	-	-	-	200.00	-	-			
	\$ 832.38	\$ 1,473.32	\$ 525.70	\$ 1,358.08	\$ 2,995.00	\$ 1,930.00	\$ 2,620.00			
Net Income/(Loss) From Operations	\$ 72.31	\$ (1,291.66)	\$ (174.65)	\$ 546.81	\$ (2,068.00)	\$ (1,060.00)	\$ (1,940.00)			
Other Expense										
2017 Eclipse Escrow Funding							\$ 800.00	\$ 1,000.00		
Library Telescope Program Escrow Funding							1,000.00	1,000.00		
Total Other Expense					N/A		\$ 1,800.00	\$ 2,000.00		

* Membership approved expenditure for 3 library telescopes with funds available through 2015

** Membership approved expenditure of \$1000 to add 4 Library Telescopes to the SLAS loaner scope program for members.

*** For purposes of the budget analysis, the LTP Escrow and 2017 Eclipse Escrow other income and other expense year to date have been excluded.

Assumption Summary – 2017

St. Louis Astronomical Society Annual Budget

Work began on the 2017 budget after the financial close for August 2016. The year to date information is therefore through August 31, 2016 with an estimated projection of activity from September 1, 2016 through December 31, 2016.

The budget information was assembled partially based on assumptions developed from the August 2016 year to date actual in areas such as membership information available at that time. The balances of the budgetary items were prepared on a line by line basis by the individual committees and committee chairpersons.

Revenue / Income:

The primary source of Revenue for the Society stems from membership fees that are assessed on an annual basis that is based on the member's individual anniversary date. The current fee structure was adopted in 2004 where the "Family Membership" was created and set at an annual rate of \$40.00 per year. At the same time, the fees for the Youth membership were decreased from \$15.00 to \$10.00 per year.

The total revenue from the membership fees for 2017 is based on:

Regular (Adult) Memberships	104 @ \$25.00/year	\$2,600
Youth Memberships	4 @ \$10.00/year	40
Family Memberships	24 @ \$40.00/year	960

As indicated in the budget, this will provide operating revenues in the total of \$3,600 for 2017. The actual revenues that will be realized during the calendar year may be different due to any changes in the actual membership numbers.

Magazine subscriptions are referenced as a memo item. The Society acts solely as an agent in these transactions as a convenience to the membership. It should be noted that the same "Club" rates for the subscriptions are available to each member in good standing through the Night Sky Network for those who choose that option.

Albeit that the Society does receive donations for the outreach activities, these donations have been ignored for the purpose of the 2017 budget due to the uncertainty. The donations are solely for the purpose to contribute to the cash flow and offset a portion of any deficit.

Operating Expenses:

These are expenses that are incurred to run the Society on a month to month basis to provide goods and services to the membership. Some of the expense categories are required to meet specific obligations that enable Society to function as an organization. The balance of the expense categories are considered discretionary and may be adjusted accordingly. The items that will be discussed in detail are the discretionary items.

Starting with 2015 the printing expenses for both the newsletter and brochures, along with the general administrative printing have been combined into a single item under operating expenses. This allows us to better track printing resources, since the functions utilize the same printing resources. The overall budget for printing expense was increased by \$255 over 2016, based on an assumed higher volume of brochure and related printing for 2017.

Events

The Homemade Fest budget remains \$100. This budget is primarily used to purchase refreshments, plates, plastic ware and door prizes. SLAS hopes to continue getting the meeting room

free of charge from the Science Center or the Kirkwood Community Center. Kirkwood waived the fee in 2016 because of our hosting telescope viewing at Kirkwood Park at least twice a year.

The Star-B-Que has been kept at a constant level as the previous year budget. This event will again be member pot luck with SLAS providing the meat, paper goods, and trivia quiz prizes. SLAS hopes to continue getting the picnic pavilion free of charge. This is normally a \$80 charge, but Babler has waived the fee because of our hosting Night Skies Over Babler twice a year.

The members in attendance will be asked to provide items as with the Homemade Fest to complement the main course provided by SLAS. This will require that the membership provide their RSVP and number of attendees so the event can be planned accordingly.

Library Telescope Program:

The SLAS Library Telescope program's was launched into the St. Louis area on November 2014. In just two years, the program has grown to 131 telescopes in public libraries with 28 library systems participating in Missouri and Illinois. The St. Louis program is now one of the largest and most successful programs in the country. On all fronts, the library telescope program is demonstrating success:

- Public – Most telescopes are regularly checked out and have patrons on a "waiting list" to get the telescope. The large deployment in August 2016 has helped reduce waiting times to less than 3 months for most telescopes. Still, there are some several telescopes with waiting times greater than three months.
 - Libraries – Feedback from library executives and staff continues to be very positive. They like the program and appreciate the work of our volunteers.
 - Star parties – Nearly 40 star parties will be delivered to libraries in 2016. This excludes 14 programs delivered to training library staff and a number of "solar" programs given to the libraries. Public attendance has been good at all of the programs.
 - Volunteers – All programs have been well staffed by volunteers. Partnering with other organizations such as the Astronomical Society of Eastern Missouri and Eastern Missouri Dark Sky Observers has helped to deepen our resources and strengthen our relations in the community.
 - Equipment – No major problems with telescopes have been reported. Since program inception, we have responded to less than 30 maintenance requests with most issues being resolved on the same visit.
 - Funding – The program has been under budget since inception and has even generated donations by libraries which have partially offset our program funding.
- Visibility – The program has helped raise our visibility in both the St. Louis area and nationally. Since program inception, our program has been covered in print, radio and TV. Nationally, the St. Louis County Library Telescope program is being featured on the American Library Association website as a "model" program.

The Library Telescope Committee requests \$200 in operating expenses for use in promoting the program and purchasing of supplies to fix minor issues with the telescopes to keep them in good working order. This equates to less than \$2.00 per telescope. Parts for major repairs are considered the responsibility of the libraries and are not budgeted.

SLAS will increase the library telescope program escrow funding by \$1,000 with the funds used to purchase telescopes to create a

"K-12 library telescope lending" program where science teachers could request a telescope for 30 days for use in school programming and for take home by students. Telescopes would be made available on a first come, first serve basis. This would be one year pilot program for 2017 only. If the program is popular with schools, it would be made a permanent program starting in 2018. If not, the telescopes would be repurposed to area libraries.

2017 Eclipse Committee:

A \$1000 allocation is budgeted as a below the line (other) expense for the funding the 2017 Eclipse Committee. These funds represent an investment in a once in a generation opportunity for SLAS to help educate our community leaders in preparation for the historic eclipse. \$500 of the allocated funds is for sponsoring workshops for local community leaders to help them prepare for the eclipse. The remaining \$500 is for task force expenses, including \$168 for constant contact email service and \$332 for promotional materials (glasses, handouts, posters, and mailers).

Outreach Support:

A \$300 allocated is budgeted for the purpose of purchasing approximately 20 reflective vests of various sizes for the purpose of identifying SLAS volunteers at outreach events. The vests will be screen printed with the words "SLAS Volunteer" and the SLAS logo.

Meeting Expense:

Meeting expense is comprised of Meeting Refreshments and Meeting Speaker Fees. The meeting refreshments are self-explanatory and have been budgeted at \$350, same the 2016 budget level. The Meeting Speaker Fees are used primarily to present honorariums to guest speakers and occasionally to partially offset travel expenses. The speaker budget has ranged between \$250 and \$500 in recent years. The 2016 speaker budget will be \$600 this year, which includes expected travel expenses/honorariums for 3 to 4 speakers and one time use red zone parking passes for non-Washington University speakers. Two of the anticipated speakers were referred to us through Prof. Alex Filippenko of Berkeley, Kara Kundert who studies focused on the cosmic epoch of reionization and Amy Kimball a staff scientist at the National Radio Astronomy Observatory (NRAO) headquarters of the Very Large Array (VLA) in Socorro, New Mexico.

Membership Initiatives:

Membership Initiatives started holding, "Welcome Aboard" Meetings for New SLAS Members. These meetings take place before the Monthly Meeting. New SLAS Members are given a SLAS Informational Folder containing information about SLAS resources and other related Astronomy topics.

Membership Initiatives, as in recent years, plans to hold two or more raffle events during 2017 as opportunities arise. In addition, attendance prizes are planned to be awarded quarterly on the meetings nearest the equinoxes and the solstices to encourage participation in SLAS's monthly general meetings. Planned prizes include signed books, CDs, movie tickets, etc.

Membership Recognition:

The membership recognition budget for 2017 is \$300. This will include \$100 for Night Sky Network pins and certificates. The remaining \$200 will be budgeted for recognition of members for contributing their time for other SLAS functions. A membership recognition committee was formed last year and an email address, recognition@slasonline.org was set up so that recommendations can be submitted to the committee. During 2016 the committee made name badges to recognize members who have maintained their membership for 10, 20 or 30 or more years.

Merchandise:

A budget of \$45 has been established to cover the setup fees for embroidery/silkscreen. Several local retailers are being considered based on overall price, quality, and convenience.

Library:

Library expenses for 2017 will be for the purpose of purchasing the latest CDs available for both Sky & Telescope and Astronomy Magazine and the RASC Handbook at an estimated cost of \$100. The remaining budget is for the purchase of books and materials of interest to the club and 2017 eclipse materials.

Loaner Scope Program:

SLAS has in its inventory, telescopes ranging from 13" to 75mm. This includes five Dobsonian reflectors, two Refractors, two ETX Maksutovs, one Schmidt-Cassegrain, one 20x80mm binocular, one Hydrogen-alpha, and one white light solar telescope. These are housed in a storage shed when not checked out by members. The current year Loaner Scope budget will be \$50 for maintenance/repair of the telescopes and upgrade of some accessories.

SLAS also added four "Library Telescopes" to its inventory for the exclusive use of SLAS members during 2015. These scopes are available for checkout at the monthly general meeting. Vice President Bradley Waller is in charge of checking out the "Library Telescopes" to members.

SLAS Brochures:

Brochure printing expense was combined with the newsletter printing expense starting with the 2017. The brochures contain information about the Society that is distributed to the general public at all outreach events. Brochure paper requirements are estimated at 15 reams of "astro-bright" premium paper at a cost of \$150.

Summary:

The board and participating committee members have increased several budget items in anticipation of increased activity in connection with the 2017 Eclipse as well as continued high volume of star parties and related public event associated with the Library Telescope program. The budget for speakers has been restored to historical levels in order to attract quality speakers from a larger radius and to provide for parking passes. Similar to 2016, funding for two key long term initiatives, the 2017 Eclipse Escrow and the Library Telescope Escrow have been categorized as investments and we be recorded as below-the-line (other) expenses. The net result is 2017 budget as presented equals a net loss from operations of \$1940 for 2017, compared a net loss of \$1060 for the 2016 budget and a net loss of \$2,068 for the 2015 budget. Meeting the projected expenses for the upcoming year will require supplementing the operations from cash reserves to the extent donations and other revenue sources do not make up the shortfall. The below the line expenses for the 2017 Eclipse Escrow and the Library Telescope Escrow total \$2,000. All attempts have been made during this process to continue to provide valued programs for the membership.

If you have questions about the amounts presented in this budget, please direct them to the individual committee chairs. They will be the best source to address these questions.

Respectfully,
Bill Winningham, Treasurer

Buford Mountain Star Party

Members of the St. Louis Astronomical Society and the Astronomical Society of Eastern Missouri participated at a private observing field near Buford Mountain, Missouri. The event occurred over the weekend of October 28 – 30, and included Jim and Ann Trull, Mark Jones, Bill and Annalise Biermann, Jack Gillette and Bill Neubert. Participants brought telescopes ranging from 10x50 binoculars to Bill Biermann's whopping 450 mm (18 inches) Dobsonian. We enjoyed a health amount of food and great conversation during the day. The skies were clear early on Friday night, and late on Saturday night allowing Mark to view 30 objects to complete his binocular deep sky list. - **Bill Neubert**

Below: Jim and Ann Trull operating their Meade LX200, while Mark Jones points out objects with a laser pointer with Bill Bierman.

Right: The Orion Nebula imaged on October 29, 2016.

Below Right: Bill Bierman at the eyepiece with Orion in the background (photo by Mark Jones)

Bottom: The SuperMoon with the top of the Arch indicated by the arrow between the buildings on Manchester. (photo by Mark Jones).



SLAS Executive Board Meeting Minutes for October 6, 2016

1. Opening Activities: Attending: Jim Small, Tom Nickelson, Larry Campbell, Bradley Waller, Rich Heuermann, Brent Buch Meeting called to order 7:08pm September minutes reviewed and approved with changes

2. External Business Next board meeting: Dec 7 (Wed) Decided 2017 dates for Board meetings to submit to Don as follows:
2017 Board Meeting Dates: Jan 5; Feb 9; Mar 9; Apr 6; May 4; Jun 7 (Wed); Jul 6; Aug 9 (Wed); Sep 7; Oct 5; Nov 9; Dec 7 Jim will forward dates to Don Ficken to put on 2017 YMCA calendar

3. Director Reports:
President – Jim Small: No report

Vice President –Brad Waller: October - Kater Murch, PhD - How LIGO pushes the limits of quantum measurement detect gravity November – Maggie Ducksworth, Mission to Mars; December - William McKinnon, PhD Pluto January - Peter Plavchan, PhD - The Golden Age of Exoplanet Discovery February - Pamela Gay, PhD - Super Secret Squirrel Stuff; March – Christine Floss PhD, Wash U. April - Kevin Evans, PhD - Weaubleau Impact Structure; May – TBD; June – Possible Expo Speaker; July – Ryan Clegg-Watkins, Wash U.; Aug – TBD; Sep – Results from TSE Brad created spreadsheet of past speakers, Other speakers possible Jim Kaler from Illinois (not available to travel, possible Skype. Jim will check)

Astro 101 – Oct – Brad Waller – Star Fleet Update and Quarterly Attendance Prizes

Membership initiative prizes – Inventory

4 Mike Brown books
2 Eris photos signed by Brown
1 book Astronauts guide to life on earth, Chris Hadfield, signed
1 CD Space Session by Chris Hadfield, signed
Jim and Mark may have some books for give away

Neil deGrasse Tyson here in May 18, 2017. Brad plans to buy 2 tickets for a raffle event.
Book signing Astronaut Mike Massimino Astronaut in Texas.
Welcome aboard new members meeting still planned for each month.

Secretary – Mark Jones: Lens sales proceeds coming in October Dark Star Party weekend at Bill Neubert's Oct 28-30

Treasurer/ALCor – Bill Winningham: Balance sheet: assets \$48,000 3Q results: net income of \$15,017 YTD Donation: \$325 since September, \$900 YTD, does not include LTP Look like we will hit \$50,000 gross income for 2016. If we average \$50K for 3 years then we would have to file form 990

Received \$1000 donation from Emerson for the Eclipse Expo. This money will go into eclipse escrow account

Hospitality – Larry Campbell: Need to buy more badge holders Service year pins, need to add to 2017 budget LTP cake planned for November

Board member at large reports

Tom Nickelson: (2017) No report

Brent Buch (2018) Working on process for video transfers

Rich Heuermann (2019) Working on parking at Wash U. Rich bought 5 parking passes (\$10 each) given to Brad for non-Wash U speakers. Good through 2018 Rich will not be at October meeting. Can someone count the number of used red spaces?

4. Committee Reports: If needed

Library Telescope Program:

Membership – Attached is the September 2016 membership report. Our membership count has dropped to 150 members due to fewer new members and lagging renewals. Last year we had 162 members for the same comparative month.

Mentor program
Classes people need
Subject Matter Experts
Social Media - Twitter
K-12 LTP

Merchandise – Infini-tees shirts for sale - \$20, Mugs \$7

Telescope Making –

Librarian – Budget meeting Oct 16 @4pm Youngs Membership Meeting 5pm Oct 23rd @Babler

Newsletter – send articles in ready to go format!

Website – www.slasonline.org/joomla Twitter account now created

Night Sky Network – In the process of testing new website, contacts will be able to add themselves for contact list!

5. Old Business - None

6. New Business – budget proposals

Motion by Don Ficken Board decided to roll budget for \$1000 into 2017 budget. Tom motion second by Brent motion passed.

Request from Christine Nobbe to co-sponsor the International Space Development Conference in May of 2017. Board deferred decision until November board meeting. Board will circulate a thread discussion.

7. Closing Activities

Motion to adjourn by Brad Waller second by Tom Nickelson

Meeting adjourned at 9:25pm

12:59 PM
11/10/16
Accrual Basis

**St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
January through October 2016**

	<u>Jan - Oct 16</u>	<u>Budget</u>	<u>\$ Over Budget</u>
Ordinary Income/Expense			
Income			
Total Magazine Subscription	1,162.88	1,297.85	(134.97)
Membership Dues	2,880.00	3,075.00	(195.00)
Total Merchandise Sales	186.00	0.00	186.00
Total Income	4,208.88	4,372.85	(163.97)
Total COGS	1,008.91	1,342.85	(335.94)
Gross Profit	3,201.97	3,030.00	171.97
Expense			
Total 1-Programs & Events	1,027.60	1,568.33	(530.73)
Total 2-Newsletter	162.20	166.67	(4.47)
3-Library expense		83.33	(83.33)
4-Astronomical League Dues	700.00	695.00	5.00
5-Loaner Scopes		37.50	(37.50)
7-Insurance	380.00	380.00	
8-Website	155.40	150.00	5.40
Total 9-Administrative Expenses	528.21	1,195.00	(666.79)
Total Expense	2,853.41	4,265.83	(1,312.42)
Net Ordinary Income	248.56	(1,235.83)	1,484.39
Other Income/Expense			
Other Income			
Total Donations	1,128.05	0.00	1,128.05
Eclipse Escrow Receipts	7,548.00	0.00	7,548.00
Interest Income	35.74	83.00	(47.26)
LTP Receipts	21,457.00	0.00	21,457.00
Non-Operating Income ^{1,2}	458.98	0.00	458.98
Proceeds from Lens Sales	20,093.04	0.00	20,093.04
Total Other Income	50,718.81	83.00	50,635.81
Other Expense			
Astro Mag Award Disbursements	472.76	0.00	472.76
Eclipse Escrow Disbursements	1,853.50	0.00	1,853.50
Eclipse Escrow Funding	800.00	800.00	0.00
LTP Disbursements	21,012.37	0.00	21,012.37
LTP Escrow Funding	1,000.00	1,000.00	0.00
Non-operating Expense ¹	59.00	0.00	59.00
Total Other Expense	25,197.63	1,800.00	23,397.63
Net Other Income	25,521.18	(1,717.00)	27,238.18
Net Income	25,769.74	(2,952.83)	28,722.57

1 An individual mistakenly signed up for SLAS instead of the Science Center, membership and magazine funds refunded.

2 Includes \$399.98 of proceeds from MSRAL 2016.

**St. Louis Astronomical Society
Balance Sheet
As of October 31, 2016**

	<u>Dec 31, 15</u>	<u>Oct 31, 16</u>
ASSETS		
Current Assets		
Checking/Savings		
Astronomy Magazine Award**	465.72	0.00
Checking - First Bank	2,940.49	3,608.98
Deposit, Certificate of	20,108.23	20,138.36
Library Telescope Escrow*	444.55	732.38
Merchandise Change Fund	20.00	20.00
PayPal	82.51	43.11
Savings - First Bank	5,361.90	25,460.55
SLAS Eclipse Conference Escrow***	539.12	6,425.29
YMCA Trout Lodge Escrow	542.87	542.87
Total Checking/Savings	30,505.39	56,971.54
Other Current Assets		
Inventory Asset	1,410.53	1,467.12
Investment in Mid-States 2016	1,000.00	0.00
Undeposited Funds	55.00	302.00
Total Other Current Assets	2,465.53	1,769.12
Total Current Assets	32,970.92	58,740.66
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	32,970.92	58,740.66
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,137.66	8,137.66
Retained Earnings	24,464.84	24,833.26
Net Income	368.42	25,769.74
Total Equity	32,970.92	58,740.66
TOTAL LIABILITIES & EQUITY	32,970.92	58,740.66

* Funds restricted for the Library Telescope Program. \$444.55 was carried over from the end of 2015. Reflects \$1,000 from the 2016 budget.

** Funds from Astronomy Magazine Award, available until 4/10/2016 (funds have been spent).

*** Registration fees and donations for SLAS sponsored eclipse seminars. Also includes \$800 from the 2016 budget.

Wanted: Newsletter Articles!

The Event Horizon needs articles from people like YOU!

Interviews, current astronomy topics, historical articles, you name it, we can use it! Send what you have to: newsletter@slasonline.org

Wanted: Volunteers!

Be sure to sign up on Night Sky Network for upcoming star parties. Lead volunteers need to know who will be there so they can tell where we are falling short. If you aren't sure how to RSVP, please ask anyone at the meeting and we can show you how on the computer after the meeting. Or contact any board or committee member to find out. See you at the next star party!

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* All meetings are on Thursdays unless noted. Dec 7 (Wed)
2017: Jan 5; Feb 9; Mar 9; Apr 6; May 4; Jun 7 (Wed); Jul 6; Aug 9 (Wed); Sep 7; Oct 5; Nov 9; Dec 7

Dark Sky Observing Dates

See you when it gets warmer!! Use SlasDialogs or Facebook to coordinate winter events!

Francis Park Events: These events are on Thursdays the week nearest the first quarter Moon
See you when it's warmer!

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month
Planetarium shows start at 7pm
12/2/2016

YMCA Edward Jones Star Parties (generally third Mondays)

Pattonville Observatory Public Viewing Dates
December 2, December 9

Broemmelsiek Astronomy Park Public Viewing
Every Friday night with ASEM members

UMSL Observatory

For directions and map
<http://www.umsl.edu/~physics/About%20the%20Department/astro.html>

All sessions include viewing of 1st quarter Moon with additional objects

Skywatch Hotline: 314-516-5706

Saturdays:

SLAS EVENTS

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.

November

18 Fri SLAS regular meeting
19 Sat Sidewalk Solar Observing SLSC
20 Sun Sky Orienteering

December

2 Fri Public Telescope Viewing SLSC
5 Mon Parkway North High School
7 Wed SLAS board meeting
7 Wed University City Public Library
8 Thur Machacek Library
8 Thur Brentwood Star Gazing
16 Fri SLAS regular meeting
17 Sat Sidewalk Solar Observing - SLSC

There is still time to qualify for your Night Sky Network pin! Simply attend the events needed to obtain

FIVE TOTAL OUTREACH EVENTS

to qualify! We already have more people that have qualified this year than last but we would love to DOUBLE last years count of 18 winners!

Check the list on page two to see how many events you have logged to qualify!

There are still 7 events left in November and December to attend.

We will see you there!

SLAS Merchandise Available

SLAS merchandise is now set up for embroidery at

Headz n Threadz at <https://hnt.threadthis.com/>

There are two locations:

Galleria: 2495 St. Louis Galleria, St. Louis, MO 63117 Telephone: 314.862.2695
galleria@headznthreadz.com

Delmar: 6662C Delmar Blvd St. Louis, MO 63130 Telephone: 314.863.2695 delmar@headznthreadz.com

[Delmar Map](#)

Simply take the garment, hat, etc you wish to have embroidered and they will take care of it. They have the SLAS logo on file. You may make modifications to the colors if you wish.

**SLAS Logo is also available at
Infini-tees and Johnny Mac's**



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 @ \$29.95 / 1 year \$ _____

TOTAL ENCLOSED \$ _____

Please send completed form with check (no cash please) made payable to
St Louis Astronomical Society
 Don Ficken, Membership
 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

President *Jim Small* 314-307-0692
 president at slasonline.org

Vice President *Brad Waller* 314-481-7250
 vicepresident at slasonline.org

Secretary *Mark Jones* 636-394-2342
 secretary at slasonline.org

Treasurer *Bill Winningham, (Don Ficken - membership)* 636-225-0269
 treasurer at slasonline.org

Hospitality *Larry Campbell* 636-244-2867
 hospitality at slasonline.org

Board Members at Large:
Rich Heuermann 314-962-9231
 Board19 at slasonline.org

Brent Buch 314-239-0329
 Board18 at slasonline.org

Tom Nickelson 314-346-9565
 board17 at slasonline.org

ALCOR *Bill Winningham* 636-225-0269
 (Astronomical League Correspondent)
 treasurer at slasonline.org

MSRAL Rep. *Jim Small* 314-909-7211
 msral_rep at astroleague.org

COMMITTEE CHAIRS

Dark Site Coordinator *Mark Jones* 636-394-2342
 darksite at slasonline.org

Librarian *Jim Small* 314-909-7211
 librarian at slasonline.org

Library Telescope Program *Don Ficken* 636-851-9630
 librarytelescope at slasonline.org

Loaner Equipment *Greg Gaines* 314-277-3082
 loaner at slasonline.org

Merchandise *Vacant*
 merchandise at slasonline.org

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'SLASdialogs' Moderator *Mark Jones, Rhonda Whelan*
 dialogsmoderator at yahoo.com

Star Party Coordinator *Bill Breden* 314-276-3613
 starparty at slasonline.org

Telescope Making *Bill Davis, Jim Melka* 314-469-3061
 telescope at slasonline.org

Webmaster *Jim Small* 314-909-7211
 webmaster 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>

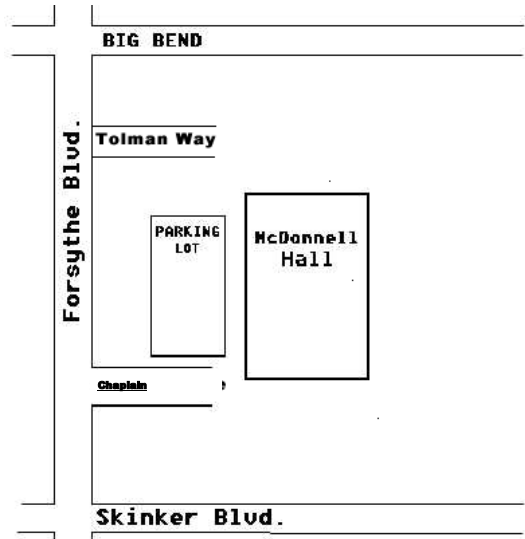


Who We Are and What We Do

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
13128 Cozyhill Drive
St. Louis, MO 63122

