THE EVENT HORIZON

ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

VOLUME 30, Issue 11
November, 2020

Mirror Asymmetry in Life and in Space

by

Dr. Brett McGuire
Massachusetts Institute of Technology

Dr. Brett McGuire of the Massachusetts Institute of Technology will be featured at the November meeting of the Saint Louis Astronomical Society. The meeting will be held via Zoom online conference only, due to the COVID-19 outbreak. The meeting and lecture will begin at 7:30 p.m. on Friday, November 20. Zoom access information below.

Most organic molecules exist in two forms that are mirror images of each other. One of the great unanswered questions in our evolutionary history is why all life forms on Earth and their critical biological molecules, such as amino acids and proteins, use only one of these forms. For instance, sugars are exclusively right-handed, amino acids are left-handed, and even DNA coils into right-handed helices. The phenomenon of single handedness is called homochirality. How and why did our single-handed world emerge? Dr. McGuire will describe how we can peer into the center of our galaxy for the answer. He will also talk about the current understanding of how such an excess may have arisen in the interstellar medium and before the formation of the Solar System

Dr. Brett McGuire is an Assistant Professor of Chemistry at MIT. He and his colleagues use the tools of physical chemistry, molecular spectroscopy, and observational astrophysics to understand how the chemical ingredients for life evolve with and help shape the formation of stars and planets.

Upcoming Meetings!

December- Maura McLaughlin, PhD Still Thinking About a Topic! University of West Virginia
January- Robert Criss, PhD Galactic Rotation & Dark Matter Washington University
February- Raymond E Arvidson, PhD Perseverance Rover Mission - Mars 2020 Washington University
March- K Michael Malolepszy Probing the Sub-Microwave Universe Part III SLAS
April Ian H. Redmount, PhD Cosmic Roller Coaster St. Louis University

Inside This Issue

President's Corner Member recognition AL Calendar!	2
SLAS Special Awards	3
The Pandemic	4
Budget	5-7
Board minutes	8
Financials	9
Events	10
Contacts	11

Thank you SOOOO much for the enthusiastic response to the sale of the telescopes and other equipment last month! We raised $670 for SLAS and $290 for East Central College!

Joining a Zoom Conference Meeting: Everyone can join! No Computer Required!

Joining us for a Zoom Conference is easy! All you need is any of the following: Computer, desktop or laptop, smartphone, **OR** any regular phone! The meeting will be open from 6:30-11pm. The extra time is to allow socializing before or after the meeting

Below is the invitation to join:

To join Zoom Meeting for SLAS Regular Meeting with computer or smartphone: Just click the link below:

https://zoom.us/j/8604505790
Meeting ID: 860 450 5790

Dial by ANY phone using your location (any phone will work)
+1 312 626 6799 US (Chicago)
Meeting ID: 860 450 5790

If you need help joining the meeting, don't hesitate to call Jim Small at 314-307-0692!!

(ps: the link for the meeting is the same each month.. It will remain so if there continue to be no problems)

President's Corner
by Jim Small

I have to say THANK YOU to all who participated in the fire sale of equipment we had last month. It's great to find new homes for equipment that was previously gathering dust. We ended up making $670 for SLAS and $296 for East Central College! The only things left are a couple of brackets for a 50mm finder.

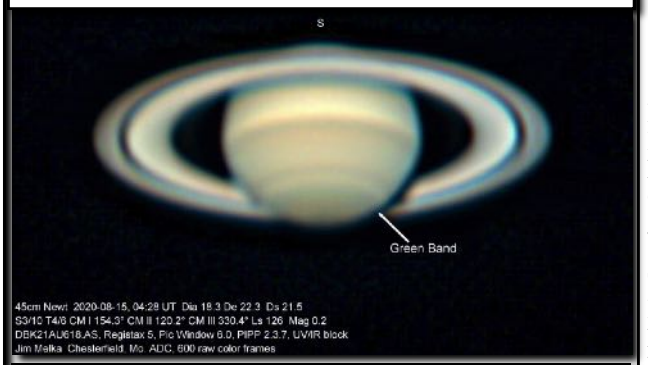
The winners for the new SLAS Special Recognition Awards have been notified and will officially receive the awards at the December meeting

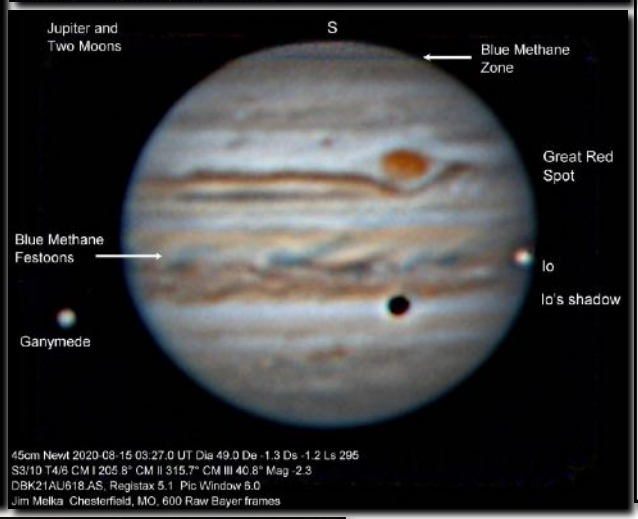
The budget will be presented at the meeting this month prior to voting at the December meeting. If you have questions, this month is the time to ask!

Have you been taking advantage of the clear weather we've been having? I hope so! See you at the meeting!

Sincerely,
Jim Small

Photos by Jim Melka!





November 2020 Membership Recognition Recipients

Five Year Certificates and Pin
Bob Beebe
Gary Runge
Joseph Schober

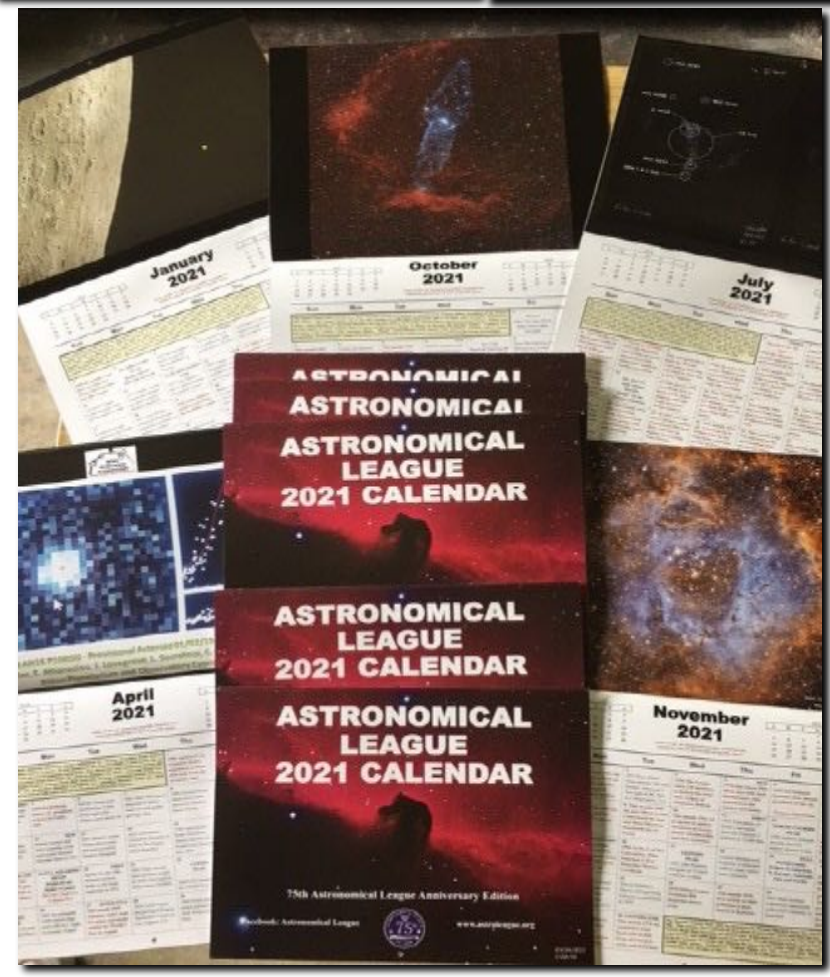
Ten Year Certificates and Pins
Bill Biermann
Doug Blum
Dan Duffy

Fifteen Year Certificates and Pin
Ed Frey

Thirty Year Certificate and Pin
Dr. Bruce Wilking

Forty Five Year Certificate
Carl Masthay

Fifty Year Certificates
Nancy Clark
Wayne Clark



2021 Astronomical League Calendar 75th Anniversary Collectors Edition

Celebrating our 75th year ending 15 November of 2021

The 75th Anniversary Planning Committee encourages your purchase as these calendars have historical notations of the Astronomical League. Starting in January, events are planned that tie in to the month's trivia.

Of course, profits from the sales goes to the ALCON Jr. budget.

THANK YOU FOR YOUR CONTINUED SUPPORT AND ENJOY OUR ANNIVERSARY CELEBRATION YEAR!

SLAS Special Recognition Awards 2020

by

Mark Jones

In 2020 SLAS introduced a new set of recognition awards. These awards are named after deceased SLAS members who made tremendous contributions to St Louis Astronomy. Nominations for these new awards were solicited early this year. Then a recognition committee reviewed the nominations and selected the 2020 special recognition award recipients. The choices were not easy as there were many wonderful individuals worthy of recognition.

Not all award recipients are SLAS members, but they do share some common attributes:

1. Their service has been a strong testimony to the legacy of each award's namesake
2. The dedication to the St. Louis Astronomical Society and to the astronomical community in the St. Louis region.
3. Their leadership, passion and friendship has contributed to the operation, stability and growth of our Society.

The Special Recognition Award Recipients for 2020 are:

The Richard D. Schwartz Supportive Faculty Award

Dr. Pamela Gay

The Robert E. Cox Popular Astronomy Award

Dr. Joe Marcus

The Albert M. Obrecht Founders Award

Jim Small

The Lois D. Fitter Outreach Award

Cook Feldman

The Alfred L. Woods Mentoring Award

Thane Bopp

How Has the Pandemic Affected Your Astronomy Hobby?

by

Bill Breeden

I never realized just how much of my observing was done during the many astronomy outreach events hosted by the St. Louis Astronomical Society. Even though I have my own telescope, and I can travel to remote locations during the pandemic, I have missed out on so much general observing during the spring and summer, and now heading into fall.

The Opposition of Mars was October 6 this year, and I missed that. The skies during the first half of October were spectacular, with a string of clear nights and very mild weather. You had to notice it; the weather in the St. Louis area was resort-like. If not for the COVID-19 pandemic, outreach events would have been in full swing, and I would have had many views of Mars, the Moon, Jupiter, and Saturn. The sky has been superb. On October 22, with the mild temperatures and clear skies, I decided to pull out my telescope and have a quick look at Mars from my own backyard. My yard is not good for stargazing - too much noise, light pollution, and too many trees. But tonight Mars happens to be in a clearing between a house and a tree, so I had about one hour to take a look.

Wow. Mars appeared about 22 arc-seconds in diameter, and it will not be larger than 20 arc-seconds again (from northern latitudes) for 15 years. I used my 9mm DeLite eyepiece, giving me 222x. Mars appeared large, and I could easily see the polar cap. The white of the cap seemed to extend 1/4 of the way around the edge, but this was probably due to its low position in the sky (25 degrees above the eastern horizon). I could also just make out some faint brown markings on the side opposite the polar cap.

It was good to be at the eyepiece again, if only for an hour. It has been so long that it was almost nostalgic to set up my telescope. I miss real astronomy! I did not realize how much observing I do at outreach events. With them all canceled due to COVID-19, I am only doing Danville, and that has been sporadic.

Without the various outreach events to motivate me, I simply have not done much lunar and planetary observing this year. Danville dark-sky observing events are still happening, with restrictions and guidelines in place during the pandemic. But they are only monthly, and we average about half of them getting clouded out. My time at the eyepiece has been severely reduced. If you have a back yard that works for observing, I envy you. I must rely on a venue for my stargazing needs. And right now, that venue is Danville, and that may be the case for the foreseeable future.

Outreach and social distancing do not mix. Astronomy outreach is, by its very nature, personal. I greet people, tell them something about what is going on in the sky tonight, and invite them to look through the eyepiece. Parents also have their kids with them, and they hoist them up to the eyepiece as well. Kids touch (and sneeze on) eyepieces, finderscopes, telescope tubes, tripods, etc. Sometimes the parents do this too! Wiping down the eyepiece and other parts of the telescope after each observer is just not practical.

How about a monitor and a video eyepiece? That would work, but I already have lots of equipment to load and set up. I would need to add a large monitor, cables, and another power source. This is probably the best solution, but for me it is sort of a let-down. If I am just going to stream a picture of the Moon or Mars on the screen from my telescope, I may as well just show people pretty pictures on a computer and leave the telescope at home. An image of Mars on the screen streamed from my telescope would not be very impressive, and is no match for viewing Mars through an actual eyepiece.

SLAS made the right choice to halt all astronomy outreach during the pandemic. There is just no safe solution. My telescope stays at home now, only to be set up and used at our Danville dark sky site.

Since I have missed so many sights through my telescope during the pandemic, I have begun to re-think the components of my amateur astronomy hobby. Virtual events have been a stop-gap measure during the pandemic, and this is one way that I have coped with the pandemic. It is great that we have this technology available, but in the long run, nothing really replaces personal interaction and observing the real sky!

Is your astronomy hobby outreach-heavy, as mine is? Are you feeling the loss, missing out on the social aspect of this hobby? Our society is so focused on outreach, that we are now faced with figuring out what comes next. Technology has already changed our hobby so much, and now we have a pandemic forcing us to stop our most common activity. Virtual events are helpful, but we are social creatures, and we enjoy practicing our hobby in the company of like-minded people. That is why we joined SLAS in the first place.

So, how has the pandemic affected your astronomy hobby? Have you found another astronomy outlet? Are you simply doing armchair astronomy and waiting it out? Let us know at SLASDialogs@groups.io. If you have not joined our online community, members may do so at https://groups.io/g/SLASDialogs.

Clear Skies,

Bill Breeden

Assumption Summary – 2021

St. Louis Astronomical Society Annual Budget

Work began on the 2021 budget after the financial close for August 2020. The year to date information is therefore through August 31, 2020 with an estimated projection of activity from September 1, 2020 through December 31, 2021.

The budget information was assembled partially based on assumptions developed from the August 2020 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 2021 is based on:

Regular (Adult) Memberships 131 @ $25.00/y $3,275
Youth Memberships 2 @ $10.00/year 20
Family Memberships 23@ $40.00/year 920

Albeit that the Society does receive donations for the outreach activities, these donations have been ignored for the purpose of the 2021 budget due to the uncertainty. Donations for plan St. Louis County Library (SLCL) events, for which we have a written agreement are also assumed to be %0 for 2021, due to COVID 19 restrictions.

As indicated in the budget, this will provide operating revenues in the total of $4,215 for 2021. 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.

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.

Newsletter Expense:

The newsletter expense consists of $225 for paper, toner and other supplies, $175 for postage, and $200 for an updated copy of Publisher.

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 2020 because of our hosting telescope viewing at Kirkwood Park at least twice a year.

The Star-B-Que remains at $200. This event will again be member potluck 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 an $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 a few short years, the program has grown to one of the largest and most successful programs in the country. On all fronts, the library telescope program is demonstrating success.

The LTP Committee's focus for the upcoming year will be on the following four areas:

$100 – maintenance budget to cover all the little things that we need to keep the telescopes in top shape (the big things we charge to the libraries) and to reimburse mileage for SLAS Members who travel to multiple library locations to perform maintenance or repair on the library telescopes. The rate will be the current IRS rate for charitable contributions ($.14) (IRS.gov). The SLAS member requesting reimbursement should provide a spreadsheet log documenting their travels. This should include: dates, mileage, and locations visited. Reimbursement requests should be made quarterly.

$200 – funding for replenishing promotional material/handouts such as business cards

The Library Telescope Committee requests $300 in operating expenses to cover items 1 and 2 above.

Meeting Expense:

Meeting expense is comprised of Meeting Refreshments and Meeting Speaker Fees. The meeting refreshments are self-explanatory and have been budgeted at $360 same as the 2020 budget level. Due to COVID 19 related limitations on in person meetings, the refreshment budget will be prorated to the extent that in person meetings actually take place. 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 $600 in recent years. The 2021 speaker budget will be $400, which includes expected travel expenses (unlikely) for 1 to 2 speakers and a stipend for 1 to 2 graduate student speaker.

Membership Initiatives:

SLAS regularly holds "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.

The budget for Membership Initiatives was increased from $400 to $450 for 2021. Membership Initiatives, as in recent years, plans to hold raffle events during 2021 as opportunities arise. Past raffles involve tickets to special speaker events such as when Neil deGrasse Tyson and Jim Lovell came to the area. Membership Initiative also intends to continue the practice of awarding attendance and other prizes to the membership. Examples of some of possible prizes for 2021 include sponsoring a membership to McDonald Observatory, telescope eyepieces, and cell phone adapters for telescopes. Please feel free to suggest your ideas for membership prizes to Brad Waller at vicepresident@slasonline.org. The budget reflects the potential cost of having to mail attendance prizes for Zoom based meetings.

Membership Recognition:

The membership recognition budget for 2020 is $420. This budget include cost for Night Sky Network pins and certificates, recognition of members for continuous membership in SLAS and for contributing time for other SLAS functions, including the recently adopted award program. The budget includes the costs for the five new awards were made available beginning in 2020, including plates for the main award displays, individual plaques for award winners and associated mailing costs. This budget item is lower

(Continued on page 6)

(Continued from page 5)

than last year's budget of $900, primarily due to the one time startup costs of purchasing the larger multi-year plaques to be displayed at SLAS meetings. A membership recognition committee was formed and an email address, recognition@slasonline.org was set up so that recommendations can be submitted to the committee.

Library:

Library expenses for 2021 includes approximately $200 for globes, $300 for the purchases DVD's and books.

Loaner Scope Program:

For 2021 the budget is $100 which is intended to cover miscellaneous repair cost. The loaner scopes are in the process of being relocated to a more accessible location. This amount does not include proceeds from the sale of excess loaner scope inventory, which will be reinvested into the loaner scope program.

Outreach:

The outreach budget for 2021 is $500. The budget is intended for the purchase of shirts for members who complete outreach training and participate in outreach events, handed out quarterly. Additional details of the training program will be announced as the new year approaches and as COVID related restriction evolve.

Website/Technology:

The budget for the Website and internet related technology was increased from $625 to $690 for 2021. The budget includes approximately $260 for website hosting, $110 to maintain Group.IO (replacement for SLAS Dialogs), various web address licenses, and $200 to purchase a SLAS owned ZOOM account for virtual meetings and virtual sky tours.

Dark Sky

SLAS will donate $400 to the International Dark Sky Association of Missouri to be used to sponsor a booth at the national meeting of the International Dark Sky Association in St. Louis at Union Station. Sept 27-28

SLAS Brochures:

The brochure expense consists of $300 for paper and toner and potentially another order of "Quarter Card" handouts.

Summary:

The Board and participating committee members have adjusted several budget items in recognition of the COVID-19 pandemic. Some items will be prorated to the extent that that in person meetings continue to be restricted. The budget also includes the addition of a Zoom license that will allow SLAS to host and record virtual meeting. Note for 2020, Zoom meetings were conducted using SLAS member's Zoom accounts. Expected revenue is down for 2021 due to the uncertainty surrounding St. Louis County Library District events that historically resulted in compensation to SLAS for running Library Telescope training events. The net result is 2021 budget as presented equals a net loss from operations of $3,607, compared a budgeted net loss of $2,756 for the 2020 and a budgeted net loss of $2,655 for the 2019. 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. Please note that the above budget summary does not include the remaining special budget approved by the membership that is reserved for moving and setup expenses for the Jefferson College observatory, nor does it include the expected depreciation expense associated with the observatory. 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 either to me or the relevant committee chairs.

Respectfully,
Bill Winningham, Treasurer

ST. LOUIS ASTRONOMICAL SOCIETY
PRELIMINARY OPERATING BUDGET - 2021

	Actual Year to Date Aug-20	Budget Year to Date Aug-20	Projection Sept-19 to Dec-20	Projection Year to date Dec-20	Budget Annual 2015	Budget Annual 2016	Budget Annual 2017	Budget Annual 2018	Budget Annual 2019	Budget Annual 2020	Budget Annual 2021
Income											
Magazine Subscription											
Total Magazine Subscription	$ 1,402.80	$ 1,136.35	$ 377.40	$ 2,061.38	$ 2,034.10	$ 1,734.40	$ 952.50	$ 1,338.90	$ 1,338.90	$ 1,338.90	$ 1,338.90
Membership Dues	$ 3,300.00	$ 3,205.00	$ 965.00	$ 4,265.00	$ 3,440.00	$ 3,725.00	$ 3,600.00	$ 3,970.00	$ 4,170.00	$ 4,265.00	$ 4,215.00
St. Louis County Library Events										1,620.00	-
Merchandise Sales		-	-		-	-	-	-	-		
Total Income	$ 4,702.80	$ 4,341.35	$ 1,342.40	$ 6,326.38	$ 5,474.10	$ 5,459.40	$ 4,552.50	$ 5,308.90	$ 5,508.90	$ 7,223.90	$ 5,553.90
Cost of Goods Sold											
Total Magazine Subscriptions	$ 1,368.80	$ 1,103.40	$ 377.40	$ 1,746.20	$ 2,034.10	$ 1,734.40	$ 952.50	$ 1,338.90	$ 1,338.90	$ 1,338.90	$ 1,338.90
Merchandise	-	100.00									
Total Cost of Goods Sold	$ 1,368.80	$ 1,203.40	$ 377.40	$ 1,746.20	$ 2,034.10	$ 1,734.40	$ 952.50	$ 1,338.90	$ 1,338.90	$ 1,338.90	$ 1,338.90
Gross Profit	$ 3,334.00	$ 3,137.95	$ 965.00	$ 4,580.18	$ 3,440.00	$ 3,725.00	$ 3,600.00	$ 3,970.00	$ 4,170.00	$ 5,885.00	$ 4,215.00
Operating Expense											
Programs & Events											
Home Made Fest	71.07	100.00	-	71.07	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Star BBQ Expense	-	-	-	-	175.00	175.00	175.00	200.00	200.00	200.00	200.00
Library Scope Program Expense	55.01	433.00	32.87	87.88	600.00	*200.00*	*200.00*	*200.00*	450.00	650.00	300.00
Outreach	297.24	750.00	-				*547.90*		650.00	1,100.00	700.00
Eclipse Workshop Dues	-	-	-	-	200.00	*200.00*					
2017 Eclipse Committee	-				200.00	-	-	-	-		
Meeting Expenses											
Meeting Refreshments	35.00	240.00	-	35.00	450.00	350.00	350.00	350.00	350.00	360.00	360.00
Meeting Speaker Fees	139.53	333.00	-	139.53	250.00	250.00	800.00	600.00	500.00	500.00	400.00
Total Meeting Expenses	$ 174.53	$ 573.00	$ -	$ 174.53	$ 700.00	$ 600.00	$ 950.00	$ 950.00	$ 850.00	$ 860.00	$ 760.00
Membership Initiatives	$ 244.66	$ 267.00	75.00	$ 319.66	$ 200.00	$ 200.00	$ 200.00	$ 200.00	$ 400.00	$ 400.00	$ 450.00
Merchandise				-	$ 120.00	45.00	45.00	45.00	100.00	-	
Membership Recognition	137.65	750.00	-	137.65	200.00	260.00	300.00	300.00	300.00	900.00	420.00
Programs & Events	$ 980.16	$ 2,873.00	$ 107.87	$ 790.79	$ 2,495.00	$ 1,780.00	$ 2,270.00	$ 1,995.00	$ 3,050.00	$ 4,210.00	$ 2,930.00
Newsletter (Postage only pre 2019)	$ 79.20	$ 115.00	$ 100.00	$ 179.20	$ 180.00	$ 200.00	$ 175.00	$ 175.00	$ 500.00	$ 600.00	$ 600.00
Newsletter Printing	$ -	$ 350.00	$ 200.00								
Total Newsletter	$ 79.20	$ 465.00	$ 300.00	$ 179.20	$ 180.00	$ 200.00	$ 175.00	$ 175.00	$ 500.00	$ 600.00	$ 600.00
Library expense	$ 81.53	$ 352.50	$ 117.45	$ 198.98	$ 300.00	$ 100.00	$ 300.00	$ 300.00	$ 470.00	$ 500.00	$ 500.00
Astronomical League Dues	815.00	825.00	-	815.00	650.00	695.00	670.00	760.00	825.00	860.00	860.00
Dark Sky Association											400.00
Loaner Scopes	-	66.00	67.95	67.95	200.00	50.00	50.00	600.00	100.00	100.00	100.00
Insurance	1,049.50	1,050.00	-	1,049.50	380.00	380.00	380.00	825.00	825.00	1,050.00	1,050.00
Website/Zoom	239.39	285.00	167.97	407.36	135.00	150.00	170.00	170.00	285.00	625.00	690.00

ST. LOUIS ASTRONOMICAL SOCIETY
PRELIMINARY OPERATING BUDGET - 2021

	Actual Year to Date Aug-20	Budget Year to Date Aug-20	Projection Sept-19 to Dec-20	Year to date Dec-20	Budget Annual 2015	Annual 2016	Annual 2017	Annual 2018	Annual 2019	Annual 2020	Annual 2021
Administrative Expenses											
Corporate Filings	-	20.50	10.50	10.50	-	20.00	-	20.00	-	20.50	12.00
Office Supplies	-	75.00	57.14	57.14	165.00	165.00	100.00	100.00	100.00	100.00	100.00
Banking Fees	-	30.00	30.00	30.00			25.00	25.00	30.00	30.00	30.00
PayPal Fees	63.74	26.66	15.00	78.74	40.00	40.00	40.00	40.00	40.00	45.00	100.00
Postage	81.40	60.00	(1.41)	79.99	75.00	90.00	90.00	90.00	90.00	100.00	200.00
Printing / Copying Expense (combined 2015)	-	-		-	888.00	1,115.00	1,370.00	1,370.00	-		
Brochures			322.00	322.00					610.00	600.00	300.00
Administrative Expenses	$ 145.14	$ 212.16	$ 433.23	$ 578.37	$ 1,168.00	$ 1,430.00	$ 1,625.00	$ 1,645.00	$ 870.00	$ 895.50	$ 742.00
Total Operating Expense	$ 3,389.92	$ 6,128.66	$ 1,194.47	$ 4,087.15	$ 5,508.00	$ 4,785.00	$ 5,640.00	$ 6,470.00	$ 6,925.00	$ 8,840.50	$ 7,872.00
Net Income/(Loss) From Operations	**$ (55.92)**	**$ (2,990.71)**	**$ (229.47)**	**$ 493.03**	**$ (2,068.00)**	**$ (1,060.00)**	**$ (2,040.00)**	**$ (2,500.00)**	**$ (2,755.00)**	**$ (2,955.50)**	**$ (3,657.00)**
Other Income / Expense											
Other Income											
Donations											
SLAS Club Members	2.05			2.05	-	-	-	-	-		
Donations - Other	100.00			100.00	-	-	-	-	-		
Total Donations	$ 102.05		$ -	$ 102.05	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Interest Income	$ 95.71	$ 67.00	$ 31.90	$ 127.61	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 200.00	$ 50.00
Non-Operating Income (Astro Mag Award)				-		-	-	-	-	-	
Total Other Income	$ 197.76	$ 67.00	$ 31.90	$ 229.66	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 100.00	$ 200.00	$ 50.00
Other Expense											
Physical Inventory Adjustment	$ -			$ -	$ -	$ -	$ -	$ -	$ -		
Astro Mag Award Disbursements	-		$ -	-							
2017 Eclipse Escrow Funding						$ 800.00	$ 1,000.00	$ -	$ -		
LTP Escrow Funding	$ -	$ -				$ 1,000.00	1,000.00	500.00	500.00	-	-
Depreciation Expense (JC Scope and Dome)		$ 3,200.00								3,200.00	3,200.00
Total Other Expense	$ -	$ -	$ -	$ -	$ -	$ 1,800.00	$ 2,000.00	$ 2,500.00	$ 500.00	$ 3,200.00	$ 3,200.00
Net Other Income / (Expense)	$ 197.76	$ 67.00	$ 31.90	$ 229.66	$ 100.00	$ (1,700.00)	$ (1,900.00)	$ (2,400.00)	$ (400.00)	$ (3,000.00)	$ (3,150.00)
Net Income / (Loss)**	**$ 141.84**	**$ (2,923.71)**	**$ (197.57)**	**$ 722.69**	**$ (1,968.00)**	**$ (2,760.00)**	**$ (3,940.00)**	**$ (4,900.00)**	**$ (3,155.00)**	**$ (5,955.50)**	**$ (6,807.00)**
Required versus Discretionary Spending											
Gross Profit	$ 3,334.00	$ 3,137.95	$ 965.00	$ 4,580.18	$ 3,440.00	$ 3,725.00	$ 3,700.00	$ 4,070.00	$ 4,270.00	$ 6,085.00	$ 4,265.00
Required Expenses											
Newsletter (postage only pre 2019)	$ 79.20	$ 115.00	$ 300.00	$ 379.20	$ 180.00	$ 200.00	$ 175.00	$ 175.00	$ 500.00	$ 600.00	$ 600.00
Astronomical League Dues	815.00	825.00	-	815.00	650.00	695.00	670.00	760.00	825.00	860.00	860.00
Insurance	1,049.50	1,050.00	-	1,049.50	380.00	380.00	380.00	825.00	825.00	1,050.00	1,050.00
Website	239.39	285.00	167.97	407.36	135.00	150.00	170.00	170.00	285.00	625.00	690.00
Corporate Filings	-	20.50	10.50	10.50	-	20.00		20.00	-	20.50	12.00
Office Supplies	-	75.00	57.14	57.14	165.00	165.00	100.00	100.00	100.00	100.00	100.00
Banking Fees	-	30.00	30.00	30.00	-	-	25.00	25.00	30.00	30.00	30.00
PayPal Fees	63.74	26.66	15.00	78.74	40.00	40.00	40.00	40.00	40.00	45.00	100.00
Postage	81.40	60.00	(1.41)		75.00	90.00	90.00	90.00	90.00	100.00	200.00
Brochures			322.00						610.00	600.00	300.00
Printing / Copying Expense	-	-	-	-	888.00	1,115.00	1,370.00	1,370.00	-	-	-
	$ 2,328.23	$ 2,487.16	$ 901.20	$ 2,827.44	$ 2,513.00	$ 2,855.00	$ 3,020.00	$ 3,575.00	$ 3,305.00	$ 4,030.50	$ 3,942.00
Balance for Discretionary Items	**$ 1,005.77**	**$ 650.79**	**$ 63.80**	**$ 1,752.74**	**$ 927.00**	**$ 870.00**	**$ 680.00**	**$ 495.00**	**$ 965.00**	**$ 2,054.50**	**$ 323.00**
Discretionary Spending											
Home Made Fest	71.07	100.00	-	71.07	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Meeting Refreshments	35.00	240.00	-	35.00	450.00	350.00	350.00	350.00	350.00	360.00	360.00
Meeting Speaker Fees	139.53	333.00	-	139.53	250.00	250.00	600.00	600.00	500.00	500.00	400.00
Membership Initiatives	244.66	267.00	75.00	319.66	200.00	200.00	200.00	400.00	400.00	400.00	450.00
Merchandise	-	-	-	-	120.00	45.00	45.00	45.00	100.00	-	-
Membership Recognition	137.65	750.00	-	137.65	200.00	260.00	300.00	300.00	300.00	900.00	420.00
Astronomy Day/Outreach	-	-	-	-	-	-	300.00	-	650.00	1,100.00	700.00
Star BBQ Expense	-	-	200.00	200.00	175.00	175.00	175.00	200.00	200.00	200.00	200.00
Library expense	81.53	352.50	117.45	198.98	300.00	100.00	300.00	300.00	470.00	500.00	500.00
Loaner Scopes	-	66.00	67.95	67.95	200.00	50.00	50.00	600.00	100.00	100.00	100.00
Library Scope Program Expense	55.01	433.00	32.87	87.88	600.00	200.00	200.00	200.00	450.00	650.00	300.00
Dark Sky Association											400.00
Eclipse Workshop Dues	-	-			200.00	200.00	-			N/A	N/A
2017 Eclipse Committee	-	-			200.00	-	-	-	-	N/A	N/A
	$ 764.45	$ 2,541.50	$ 493.27	$ 1,257.72	$ 2,995.00	$ 1,930.00	$ 2,620.00	$ 3,095.00	$ 3,620.00	$ 4,810.00	$ 3,930.00
Net Income/(Loss) From Operations	**$ 241.32**	**$ (1,890.71)**	**$ (429.47)**	**$ 495.02**	**$ (2,068.00)**	**$ (1,060.00)**	**$ (1,940.00)**	**$ (2,600.00)**	**$ (2,655.00)**	**$ (2,755.50)**	**$ (3,607.00)**
Other Expense											
2017 Eclipse Escrow Funding						$ 800.00	$ 1,000.00	N/A	N/A	N/A	
Library Telescope Program Escrow Funding						1,000.00	1,000.00	500.00	500.00	-	0
Depreciation Expense (JC Scope and Dome)										3,200.00	3,200.00
Total Other Expense					N/A	$ 1,800.00	$ 2,000.00	$ 500.00	$ 500.00	$ 3,200.00	$ 3,200.00
Actual Historical Net Income for prior years				**$ 2,243.34** (2014)	**$ 368.42** (2015)	**$ 30,000.32** (2016)	**$ 10,680.08** (2017)	**$ 4,325.86** (2018)	**$ 2,924.55** (2019)		

* Includes separately voted funds for ISDC

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

Note doesn't currently include lens/scope sales or escrow receipts

St. Louis Astronomical Society
Devoted to the Interest and Advancement of the Science of Astronomy
Executive Board Meeting Minutes Sept. 3, 2020

1. Opening Activities
a. Attendance: Officers: Jim Small, Mark Jones, Brent Buch, Brad Waller, Larry Campbell, John Newcomer, Members: Jeff Carpentier, Bill Poletti
b. Meeting opened at 7:03pm via Zoom
c. Approval of last month's meeting minutes. Minutes were distributed before the meeting. Motion to approve minutes by John N. and second by Brent B. Minutes were approved.
d. Next Board meeting date: Dates for 2020: Meetings will be via Zoom until further notice: Nov 5, Dec

2. Upcoming General Membership meeting topics:
a. **Speaker**: October Speaker is Marco Cavaglia, PhD, Black Holes: Astrophysics Final Frontier
b. Special Awards needed: Awards will be planned for November
c. Speaker Press Release: Brad sent October and November speaker bios to Jim and Rich H. for release
d. Special Business needed: Hope to sell some astro items at October meeting. Descriptions to be published in newsletter
e. A101: Send out invite to share Mars photos at meeting. Jim will send out NSN blast for photos for newsletter and meeting

3. SLAS Financial Report
a. Balance Sheet. Report through Aug in newsletter. $66K not earning much interest. Balance $81,700.
b. Profit/Loss report. Net YTD income of $619. Expenses lower than expected, $815 spent on Astro League dues. Reports thru end of September
c. Corporate filings: State filing due each August 31, Tax filing each May 15th. Annual filing has been made, only 1-year renewal was made due to state website problems.
d. 2021 Budget, current projection for membership dues is $4410. Outreach budget $500, Meeting refreshment kept at $360. Add $50 for added postage. Do we want to do a Zoom Subscription? Next budget meeting. Oct 18th at 4pm.

4. Speaker Committee
a. Budget - $500, balance $353.
b. Open dates for 2021- May 2021, possibly Larry Bartoszek, Periodic Table
c. Topics of interest – Mars 2021
d. Stipends - no more stipends expected for 2020
e. Travel - no more travel expenses expected for 2020
f. Upcoming speakers: see below

SLAS Monthly Meetings **Presentions 2020**

Month	Name	Topic	Sponsor
16-Oct-2020	Marco Cavaglia, PhD	Black Holes: Astrophysics Final Frontier	Univ of MO Science & Technology (Rolla)
20-Nov-2020	Brett McGuire, PhD	Mirror Asymmetry in Life and in Space	National Radio Astronomy Observatory: West Virginia
18-Dec-2020	Maura McLaughlin, PhD	Still thinking about a Topic :)	University of West Virginia

SLAS Monthly Meetings **Presentations 2021**

Month	Name	Topic	Sponsor
15-Jan-2021	Robert Criss, PhD	Galactic Rotation & Dark Matter	Wash U
19-Feb-2021	Raymond E Arvidson, PhD	MARS!!!	Wash U
19-Mar-2021	K Michael Malolepszy	Probing the Sub-Microwave Universe Part III	SLAS
16-Apr-2021	Ian H Redmount, PhD	Cosmic Roller Coaster	St. Louis U
18-Jun-2021	Brad Jolliff, PhD	China's Exploration of the Moon: The Chang'e Missions	Wash U
16-Jul-2021	John Newcomer	Hiking on the Mountains of the Moon: The Voyage of Apollo 15	SLAS

5. Membership Initiatives
a. Budget - $400. Balance $62
b. Welcome Aboard Meetings. Need to start Zoom type meetings for new members, Mark J. to write-up proposal. Thursdays might be a good day for such meetings.
c. Raffles – none planned for 2020
d. Attendance prizes this month none planned, next prizes will be in December

6. Membership Recognition
a. Total Budget $900, balance $763
b. NSN Outreach Awards: Buy NSN pins in December
c. Membership Report: Our member count is 188 at month end which was up by eight members over last month due to a surge of new memberships including four new family memberships. We are six members above the start of the year.
d. Member anniversary awards. Plan for November or December meeting. Mark J to calculate anniversaries for Larry. Bred to print out new certificates.
e. New Award program - $600 budget, $600 balance
1. New Award Committee report: ??. Chairman – Larry Campbell, Jim Small, Mark Jones, Cook Feldman, Sharon Bertram, Fred Schovanez, Bill Neubert
2. New Award Policy and nomination process – awardees chosen
3. Submittal deadlines –
4. Nomination reviews: Nomination reviews completed in September
5. Award selection: selections made and award letters to be mailed
6. Plaques purchased: Larry to talk to Mueller's South St Louis Hampton about plaque designs. Larry to set up meeting for design of plaques. Individual and perpetual plaques.
7. Awards presented: Presented in November or December

7. Outreach
a. Budget - $1100, balance (Spent Francis park signs and SLAS General Meeting A-frame=$297.24)
b. Member Training Program Status: on hold for the time being.
c. Purchase of T-shirts for volunteers completed training - on hold for the time being.
d. Purchase of lawn signs: Bradley working on SLSC signs with John Newcomer to fit on A-frames.
e. Upcoming outreach events: Virtual outreach for this fall
f. Awards/recognitions – NSN awards early 2021
g. NSN Outreach hours YTD – no report
h. Virtual zoom events to SLCL, 2-4 events Jan-Feb 2021

8. Old Business: a. Training Program start a committee - on hold for the time being.

9. New Business: None

10. Other Committee Reports: If needed

A. SLSC Business: a. First Friday actions: Brad will talk to SLSC about when to start outreach events b. Other immediate business

B. SLCL Business: a. Annual contract – virtual programs for winter to be chosen tomorrow b. Upcoming events – see NSN calendar

C. Jefferson College Business: a. Committee Meeting report: Need to send NSN blast for Jefferson College Virtual Zoom Event
b. Upcoming Outreach Event: Virtual event Sunday, Oct 4
c. Expense: Spent $113 for new controller and cable

D. Library Telescope Committee a. Budget – $650, balance $563
b. Upcoming builds or maintenance events – none planned for 2020
c. Maintenance budget - $200
d. Mileage re-imbursement - $250
e. Promotional materials - $200

E. SLAS Social Events a. Budget - $300, balance $229
b. Homemade Fest - $100 budget
c. Star-B-Q - $200 budget, cancelled for 2020

Other

F. SLAS Brochures a. Budget $325, balance $325 b. Quarter cards, no hold plenty of cards in stock.

G. Loaner scope Program
a. Budget - $100, Balance $32 – Mark Jones and Jim Small processed the two 10" Meade telescopes (LX-50 and LX-200) and moved them to the trailer at Jefferson College Observatory. Photos were taken and items were inventoried and marked.
b. New donations – a mint condition Meade 10" LX50 telescope including soft case and heavy-duty tripod and wedge.
c. Replacement Parts for the LPTs -
d. Items for sale Already sold the Tasco 4.5" reflector for $100 to Ed Frey. More to be included in newsletter for sale. Proceeds to be used for Loaner scope program, Observatory, or some items for East Central College.
e. Brad needs to pick up LTP that John has repaired and Brad will install fanny pack.

H. SLAS Library
a. Budget - $400, balance $317
b. Other - Board decided to order Eclipse globe for $109

11. Closing Activities
Motion to adjourn by Brent B. second by Bill W. Meeting adjourned at 9:35pm

St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
January through October 2020

	Jan - Oct 20	Budget	$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	100.00	1,215.00	(1,115.00)
Magazine Subscription	1,968.20	1,303.20	665.00
Membership Dues	4,310.00	3,625.00	685.00
Total Income	6,378.20	6,143.20	235.00
Cost of Goods Sold			
Magazine Subscriptions	1,803.45	1,270.25	533.20
Total COGS	1,803.45	1,270.25	533.20
Gross Profit	4,574.75	4,872.95	(298.20)
Expense			
1-Programs & Events	1,088.03	3,692.00	(2,603.97)
2-Newsletter	79.20	590.00	(510.80)
3-Library expense	198.98	416.66	(217.68)
4-Astronomical League Dues	815.00	860.00	(45.00)
5-Loaner Scopes	67.95	83.00	(15.05)
6-Brochures		450.50	(450.50)
7-Insurance	1,049.50	1,050.00	(0.50)
8-Website	407.36	565.00	(157.64)
9-Administrative Expenses	277.98	254.50	23.48
Total Expense	3,984.00	7,961.66	(3,977.66)
Net Ordinary Income	590.75	(3,088.71)	3,679.46
Other Income/Expense			
Other Income			
Donations	102.05		102.05
Interest Income	95.71	167.00	(71.29)
LTP Receipts	1,776.81		1,776.81
Proceeds from Lens Sales	694.10		694.10
Total Other Income	2,668.67	167.00	2,501.67
Other Expense			
LTP Disbursements	1,799.26		1,799.26
YMCA Trout Lodge ESCROW Expe...	14.21		14.21
Total Other Expense	1,813.47		1,813.47
Net Other Income	855.20	167.00	688.20
Net Income	**1,445.95**	**(2,921.71)**	**4,367.66**

St. Louis Astronomical Society
Balance Sheet
As of October 31, 2020

	Dec 31, 19	Oct 31, 20
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	7,187.45	7,519.99
Deposit, Certificate of	15,841.67	15,915.06
Library Telescope Escrow	1,053.86	1,106.41
PayPal	77.94	741.30
Savings - First Bank	41,122.69	41,145.01
YMCA Trout Lodge Escr...	14.21	0.00
Total Checking/Savings	65,297.82	66,427.77
Other Current Assets		
Inventory Asset	761.53	761.53
Undeposited Funds	20.00	0.00
Total Other Current Assets	781.53	761.53
Total Current Assets	66,079.35	67,189.30
Fixed Assets	15,000.00	15,336.00
TOTAL ASSETS	**81,079.35**	**82,525.30**
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	69,757.14	72,581.69
Net Income	2,824.55	1,445.95
Total Equity	81,079.35	82,525.30
TOTAL LIABILITIES & EQUITY	**81,079.35**	**82,525.30**

We could use articles for the newsletter. The following topics are fine for submission.

1. Star party reports. Let us know how a star party you attended went! Photos would be most welcome in addition to the article.

2. Observing reports. Actually made it out observing? Let us know how it went. Taken some astro photos? Please submit!

3. Bought something or built something? How about a review or an article!

Send to newsletter@slasonline.org

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 Nicoletti's Restaurant in Valley Park* All meetings are on First Thursdays unless noted. ***Note: Board meetings will be via Zoom until further notice.*** Dec 3

Dark Sky Observing Dates

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

Sky Orienteering Events For members who want to gather and do some relaxed observing at Babler State Park

Please RSVP if you plan to come!

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month Planetarium shows start at 7pm Dec 4

Pattonville Observatory Public Viewing Dates *See you next year! Maybe!*

Broemmelsiek Astronomy Park Public Viewing Every Friday by appt

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:

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.

SLAS Events

November

16 Mon	Constellation Tour 21
20 Fri	SLAS Regular Meeting
21 Sat	Modifying Library Telescope
23 Mon	Constellation Tour 22
30 Mon	Constellation Tour 23

December

3 Thur	SLAS Board Meeting
4 Fri	First Friday
6 Sun	Aim for the Stars - Jeffco
7 Mon	Constellation Tour 24
12 Sat	SLAS Dark Sky Observing
14 Mon	Constellation Tour 25
18 Fri	SLAS Regular Meeting
21 Mon	Constellation Tour 26
28 Mon	Constellation Tour 27
31 Thur	New Year's Eve!

January

1 Fri	Happy New Year!
4 Mon	Constellation Tour 28
7 Thur	SLAS Board Meeting
9 Sat	SLAS Dark Sky Observing
11 Mon	Constellation Tour 29
18 Mon	Constellation Tour 30

February

4 Thur	SLAS Board Meeting
6 Sat	SLAS Dark Sky Observing
19 Fri	SLAS Regular Meeting

For other events, watch the calendar on the website. Virtual stargazing events and other online activities will be registered there. We hope you can join us for some of these activities!

SLAS Merchandise Available

SLAS merchandise is now set up for embroidery at **Headz n Threadz at www.headznthreadz.com**

There is now only one location:
1065 Regency Parkway, St. Charles MO 63303
Telephone: 314.528-8100
sales@headznthreadz.com
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 www.Infini-tees.com

SLAS MEMBERSHIP APPLICATION

Name: Last _____

First, Middle Initial _____

Address _____

City, State, Zip Code _____

email address _____

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

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 @ $43.95 / 1 year $_____

(S&T may also be renewed at their website: http://www.skyandtelescope.com)

Astronomy @ $34.00 / 1 year $_____

TOTAL ENCLOSED **$_____**

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 ***Bradley R Waller*** 314-481-7250
vicepresident at slasonline.org

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

Treasurer ***Bill Winningham, (Don Ficken - membership)***
treasurer at slasonline.org 636-357-2763

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

Board Members at Large:

Tom Nickelson 314-346-9565
board20 at slasonline.org

Brent Buch 314-239-0329
board21 at slasonline.org

John Newcomer 314-496-4636
board22 at slasonline.org

ALCOR ***Bill Winningham*** 636-357-2763
(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 slasonine.org

Merchandise ***Vacant***
merchandise at slasonline.org

Membership ***Don Ficken*** 636-225-0269
membership at slasonline.org

Newsletter Editor ***Jim Small*** 314-909-7211
newsletter at slasonline.org

Observing Programs ***Mark Jones*** 636-394-2342
observing at slasonline.org

Publicity ***Rich Heuermann*** 314-962-9231
publicity at slasonline.org

Recognition ***Larry Campbell*** 636-244-2867
recognition at slasonline.org

Social Media *Vacant*

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

Star Party Coordinator ***Bill Breeden*** 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

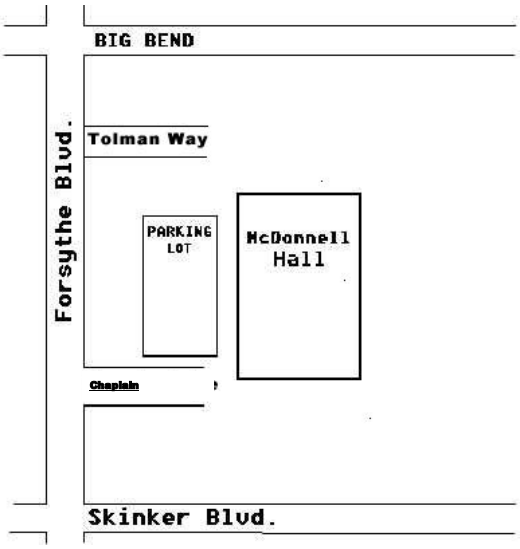
Follow us on
Twitter: @stlastro
Facebook: @stlastro

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 any-one 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