

# THE EVENT HORIZON



## ST. LOUIS ASTRONOMICAL SOCIETY

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

**VOLUME 31, Issue 8  
August, 2021**



### **Astronomical Spin: Planets, Stars and Galaxies by Professor Robert Criss Washington University**

Professor Robert Criss of Washington University will be featured at the August meeting of the Saint Louis Astronomical Society. The meeting will be held online, via Zoom. The meeting and lecture will begin at 7:30 p.m. on Friday, August 20. Zoom access information will be posted on the Society's website, [www.slasonline.org](http://www.slasonline.org). The event, cosponsored by NASA's Missouri Space Grant Consortium at Washington University, is open to the public free of charge.

Everything in the universe is in motion. Astronomical objects spin as well as move through space. Dr. Criss is currently work-

ing on theories connected with the spin of stars, planets, and galaxies. He will talk about their spins, and what the spin reveals of the physical and chemical nature of these objects.

Robert Criss is a Professor Emeritus in the Department of Earth and Planetary Sciences at Washington University. He is a stable isotope geochemist specializing in hydrogeology - the geology of water and systems of water. Much of his research involves environmental problems and applications. He is also interested in the motions of astronomical objects and in the nature of dark matter.

#### **Upcoming Meetings 2021**

**September** - Larry Bartoszek, PE The Sloan Digital Sky Survey Telescope

**October** TBA

**November** - Voyager speakers

**December** - TBA

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### **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

**18th Annual SLAS Star-B-Q  
Saturday, August 21, 2021  
See page 3 for details!!**

## President's Corner by Jim Small

ANOTHER fantastic month! The error in pouring the pad was fixed by the contractor, and new bolts for securing the pier were put in place. The dome was assembled and checked for proper operation. The walls are level and the dome rotates smoothly. We are still working a bit on the motors to run the shutter but it will work fine. The walls were sealed to the concrete and panels were sealed to each other. The door was reinforced and a gate was installed in front of the door. The pier was put in place and the sand was returned to the inside. It has been positioned to face North using an 8" sct. Next week we will bring the telescope and install it on the pier! It will then be tested before the grand opening of the observatory. We are still hoping to have the grand opening on Sunday, September 12th.

We still have a plethora of stuff for sale this month except for the electronic Meade 4.5" and the antique mount. We still have the rest of the telescopes, tripods, and a bunch of sextants! See the last newsletter for a complete list. Some of it might find it's way to the Star-B-Q if you want a look at it.

**AND, don't forget the Star-B-Q is THIS Saturday at Babler Park! See the next page for the details.**

Going on RIGHT NOW is the virtual ALCON (Astronomical League Convention). It is all online and there are three days worth of speakers, TONS of door prizes, etc. The keynote speaker is Dr. Jocelyn Bell!!

You can still register from the main page here:

<https://www.alconvirtual.org/>

You can access the schedule here:

<https://www.alconvirtual.org/schedule>

The conference runs from 3-9:30pm on Thursday, Friday and Saturday. Maybe I'll hear your name called for one of the door prizes!

SLAS will be hosting MSRAL in 2022 and we are looking for people to participate on the planning committee. Contact me or Mark Jones if you are interested in helping out! We are planning on hosting it at Washington University in June of 2022. The first committee meeting will be announced at the meeting Friday

The delta variant of the COVID 19 virus is in full force now across the St. Louis area. As a result, the in-person Library Telescope programs have already been canceled and it is certain that the Science Center First Friday events will not include telescope viewing in the near future. We will also not be meeting in person at Washington University in the near future, either. Please be certain you wear a mask at any of our events. Get vaccinated and stay safe!

Jim Small

## Sweltering Evening at Francis Park Still Draws a Crowd by Bill Breeden

SOUTH ST. LOUIS – It was a hot day in St. Louis on August 11, 2021. Temperatures were near 100F (38C) as the afternoon turned into evening. By my estimates, we had about 80 visitors to our telescopes on Wednesday evening. This was our third night this year in Francis Park, and all three were reasonably clear! Our usual cloud-out percentage is about half of our events, so this year we are really playing catch-up after all the COVID related canceled events. By August, we usually have scheduled 5 events, and 2 or 3 of them would have been clouded out, so we are doing quite well this year. Still a long way to go catch up with all the canceled events from 2020, but at this rate, we may succeed!

We had eight volunteers and 6 telescopes, mostly Schmidt-Cassegrains, with one Maksutov-Cassegrain and one reflector. A 4-day old crescent Moon hung beautifully in the western sky over the valley, with Venus just below and to the right. Before sunset, two of us (possibly three) offered safe views of the Sun through white-light solar filters. There were no sunspots to be seen, but the people that observed the Sun through my telescope were still excited about it. Just mention that the Sun is 800,000 miles in diameter and watch minds blow! Venus sported a gibbous phase as it swings around the far side of the Sun, showing us an apparent diameter of just 13 arc-seconds. This is nearly as small as Venus gets – when it is on the near side of the Sun, its apparent size can approach a full arc-minute (60 arc-seconds)!

With the Science Center First Friday events (with SLAS) still on hold due to COVID, I am spreading the word about our Francis Park events far and wide. A big THANK YOU to Brad Waller for putting up the signs in the park advertising our event two days prior, providing the schedule hand-outs, and generally corralling passers-by to our stargazing event! I really miss the Science Center outreach, but I am happy that we have alternative events to fall back on.

On page 4 are some photos from our evening in Francis Park. All photos by the author. Won't you join us next month?

Clear Skies,

Bill Breeden



# 18<sup>th</sup> Annual SLAS Star-B-Q Saturday, August 21, 2021 Alta Picnic Shelter

Come join fellow members of the SLAS in Babler State Park at the Alta Picnic Shelter for a day of food, games, and observing. *This area has a large shelter, restrooms.* SLAS will once again provide the hamburgers and hotdogs. We ask for you to bring your favorite drinks and side dish or dessert. Don't forget to bring your telescope or binoculars, chairs and bug spray!

Activities will include: **Astronomy Trivia Quiz and prizes, solar viewing and plenty of socializing!** Then we pack up and move to the Babler Monument area where we will observe from 8-Midnight. Don't have a telescope? Don't worry this is a great chance to see other member's telescopes.

**3pm – Picnic begins**

**4pm-6pm Food line open**

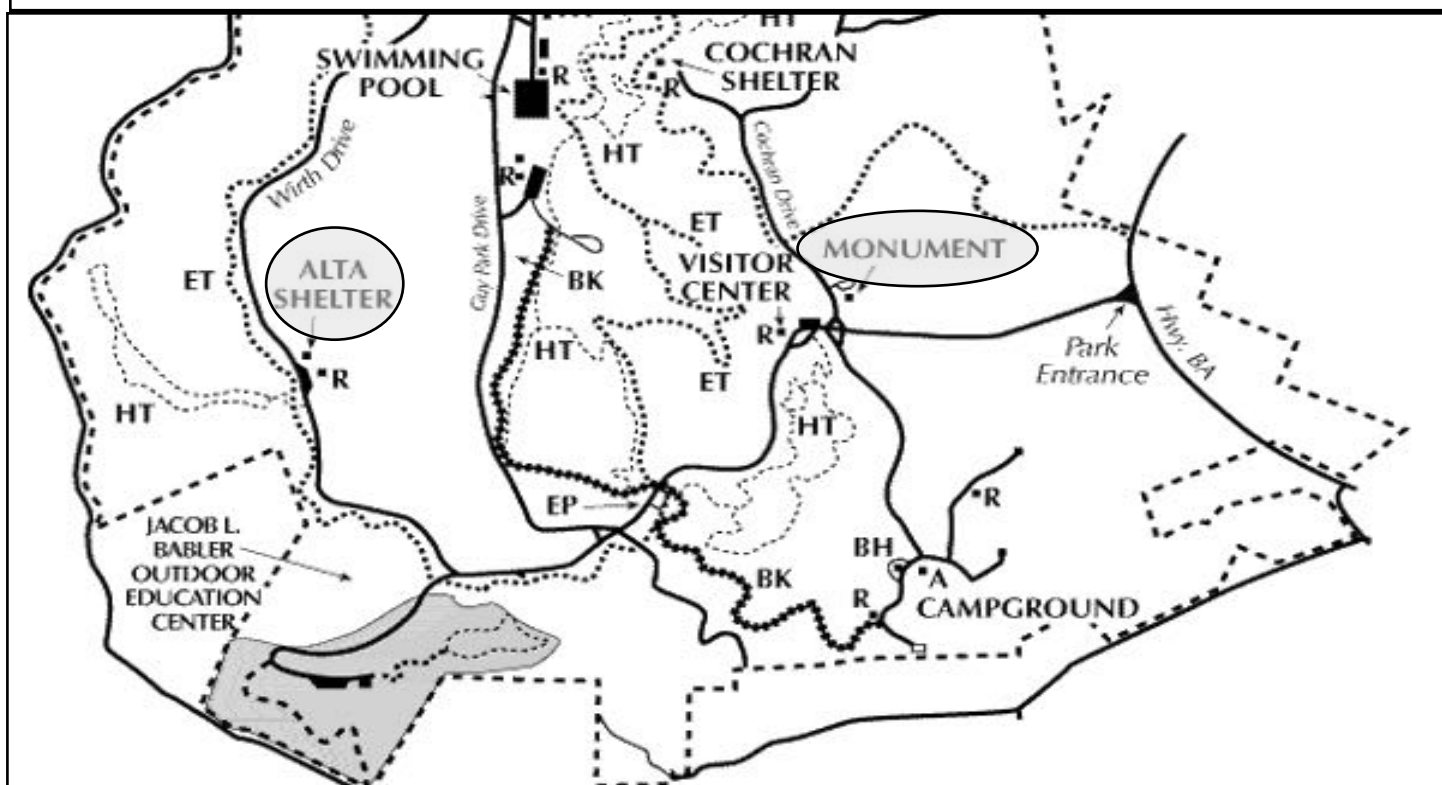
**5pm-6pm Trivia Contest (with prizes)**

**6pm-7pm- cleanup shelter**

**7:49 Sunset Move to Monument Area**

**8pm-midnight- Observing at Monument Area**

**Special Note: There will be solar viewing during the day**



Francis Park!



## Update on "Slaton-Cave" Telescope Moved to Missouri S & T at Rolla by Joe Marcus

*Editor's Note: This is a letter sent to Brad Waller and Jim Small after Joe successfully negotiated a new home for the very nice large Newtonian at Missouri S and T where it will be used by the university.*

As an update, Dr. Marco Cavaglia, Missouri University Science and Technology, Rolla, and his PhD graduate student, Dripta Bhattacharjee, rented a U-Haul truck and came to St. Louis yesterday to retrieve the 10-inch Cave Astrola Newtonian. They hauled it back to Rolla campus, where it now safely resides. They will be set up in the coming months at the Observatory for student use and public demonstrations.

I call it the "Slaton-Cave" telescope, because it had been significantly upgraded by Jon Slaton, Alton, a past member of SLAS, who now resides in Springfield, MO..

Attached are two photos, one of us with the telescope in the garage, and the other, with the scope disassembled, secured, and ready for transport to the Missouri S&T campus.

You know Marco well. Dripta will get her PhD in November and then do a post-doc at Kenyon College. She was recently awarded a Women in Physics Grant from the American Physical Society to establish a Women in Physics Group at Missouri S&T. She is active in the Society of Physics Students. These groups will be using this telescope as well as the Observatory's main instrument for public demonstration and research.

Thanks to both of you for helping in identifying this opportunity and for your interest in this project, which could not have happened without your connection, especially your gentle nagging of Marco and me, Brad. I will keep you informed of any further progress.

Keep Kool, all best,

Joe



## Stargazing at the Arch by Richard Fefferman

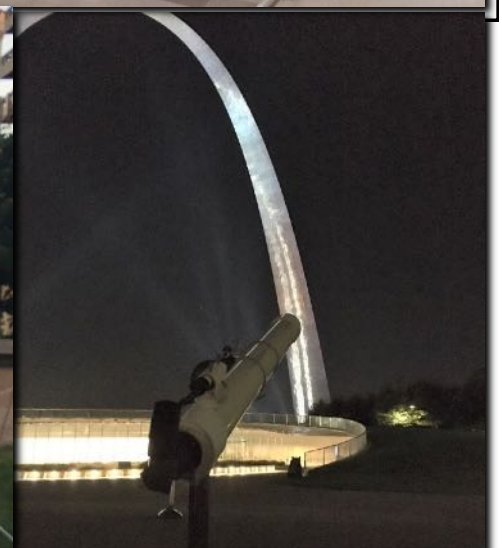
Thanks to Mark Jones and Don Ficken for the help last night. I have a couple of pictures of the "inside program," which featured our ranger Melissa talking about wishing on a star and then my presenting the Junior Ranger Night explorer workshop.

We logged an attendance of 240 for the telescope viewing. I think the decision to start early was vindicated as there were more people early on, although less to see. There is nothing wrong with aiming a telescope at the Arch or the Courthouse dome if it is still light out or there is a cloudy stretch. It is a way to demonstrate magnification, inverted/reverse images, etc. Fortunately, we had about as good conditions as I can remember on an August night at the Arch.

The next event will be on September 18. Hope to see you there!

**Below:** Mark Jones and his 4" Refractor

**Bottom:** Don Ficken, his 17" Coultter and the line to see!





**Above Left:** Moving the pier for the 16" Meade into the dome. **Above:** Working on the motors to rotate the dome and open and close the shutter. **Left:** Reed Eschemann (kneeling) is the Eagle Scout who was in charge of moving the dome from the Moody residence to the pad at the Jefferson College Observatory. He did an excellent job of coordinating the effort.

**FOR SALE: Marvin Fridley has two telescopes for sale via his son, Mark.** 1. The top three photos are of his 14" truss telescope. Left to right: Mirror box closed up, Secondary housing with telrad and JMI 2" focuser, and open view of the mirror. The telescope is a longer focal length, the mirror box is 29" tall, and the truss tubes are 4' long. It also has electronic encoders. 2. The bottom two photos are a Meade ETX-LS ACF 6" (maybe) telescope. If you are interested in either scope, contact Jim Small at 314-307-0692 or [jsmall@earthlink.net](mailto:jsmall@earthlink.net)



**St. Louis Astronomical Society**  
**Devoted to the Interest and Advancement**  
**of the Science of Astronomy**  
**Executive Board Meeting Minutes 7/1/2021**

**1. Opening Activities** a. Attendance: Jim Small, John Newcomer, Mark Jones, Brad Waller, Larry Campbell, Bill Winningham, Bill Poletti b. Open Meeting 7:15pm c. Approval of last month's meeting minutes Motion to approve by Brad W. second Larry C. Minutes were approved d. Next Board meeting date: Dates for 2021: Aug 5, Sep 2, Oct 7, Nov 4, Dec 2. Meetings will be via Zoom until further notice:

**2. Upcoming General Membership meeting topics:** a. **Speaker:** John Newcomer b. Special Awards needed: none this month c. Speaker Press Release: release is out d. Special Business needed: none e. A101: Jim Small, small spectroscope Per Rich Heuermann - The Events Management web site still says "WashU is not currently hosting external events." I can look at the site each month when I send out the press release. I don't expect change until at least September - but who knows? The Earth and Planetary Sciences Colloquium lectures were still on Zoom, through June 2. No new ones have been posted on the Department website yet. In-person Colloquia would be an indication that events are again being scheduled in classroom

**3. SLAS Financial Report** a. Balance Sheet. Income \$1129 end of April b. Profit/Loss report; Event telescopes - \$980, c. Annual Budget meetings - start in September d. Corporate filings: none at this time

**4. Speaker Committee** a. Budget - \$400, balance \$393

b. Upcoming speakers:

**SLAS Monthly Meetings**

**Presentations 2021**

Month	Name	Topic	Sponsor
16-Jul-2021	John Newcomer	Apollo XV - 1971 Mission To the Mountains of the Moon	SLAS
20-Aug-2021	Robert Criss, PhD	Galactic Rotation & Dark Matter	WashU
17-Sep-2021	Larry Bartoszek, PE	The Sloan Digital Sky Survey Telescope	
15-Oct-2021			TBA
19-Nov-2021	Jon Lomberg	V'ger speakers	
17-Dec-2021			TBA

c. Filled dates for 2022 - Brad to send list d. Topics of interest- James Webb Space Telescope, Event Horizon Katie Bouman e. Stipends - none planned due to COVID f. Travel- none planned COVID

**5. Membership Initiatives** a. Budget - \$450, balance \$270 after attendance prizes procured b. Welcome Aboard Meetings c. Raffles - none planned d. Attendance prizes this month-none this month

**6. Membership Recognition** a. Total Budget \$420 b. NSN Outreach Awards: planned for 1Q2022 c. Membership Report: The latest SLAS Membership report shows 218 members. The growth came primarily from new individual and family memberships. This member count is well above numbers dating back at least a dozen years - even well above the counts of the 2017 Total Solar Eclipse which peaked at 184 members d. Member anniversary awards - planned for 4Q2021 e. New Award program - \$600 budget, balance \$350

1. Special 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 - 3. Submittal deadlines **Extend the deadline again? No deadline remains July 1st** 4. Nomination reviews: 5. Award selection: 6. Plaques purchased: **Perpetual plaque will be picked up by the meeting.** 7. Awards presented:

**7. Outreach** - a. Budget - \$700, balance \$677 b. Member Training Program Status: on hold for the time being. c. Purchase of T-shirts for volunteers completed training d. Purchase of lawn signs: complete e. Upcoming outreach events: see NSN calendar

f. Awards/recognitions - see special awards

g. NSN Outreach hours - 1Q2022, 122 hours as of July 1st

**8. Old Business:** a. Training Program start a committee

**9. New Business:**

Jim Small motion: SLAS will sponsor the 2022 MSRAL Convention here in St. Louis on Board approval with Jim Small chair, Mark Jones co-chair, Cook Feldman treasurer. Larry C second. Motion passed -Mark Jones motion: I would to make a motion that we partner with an eBay seller from Rolla to sell up to 10 WWII sextants kits donated by

Wash U. and that we split the sales revenue 50/50. Prior to selling SLAS will offer to sell to members for \$60 each, deadline for members sales is August 1. Second Brad, Motion passed Adding Lookin' Up to website

Adding Francis Park Viewing Schedule to Site

**10. Other Committee Reports: If needed**

**A. SLSC Business:**

a. First Friday actions: Starting in July but no telescope viewing until at least September

b. Other immediate business - None

c. Solar Sunday, may start soon, don't know if Planetarium doors will be open

**B. SLCL Business:**

a. Annual contract - contract signed for limited events, see list below

b. Upcoming events - **New in person library telescope programs once per month this Fall beginning in September. One virtual program per month in the fall as well.**

**SLCL In-Person Events**

Thursday, September 16th at Grant's View Library

Thursday, October 14th at Florissant Valley Library

Monday, November 8th at Headquarters

Monday, December 8th at Daniel Boone Branch

1/month virtual programs

**C. Jefferson College Business:**

a. Committee Meeting report: Progress of observatory move: Scope was taken down and removed from the dome Saturday, June 26<sup>th</sup>. It is being stored in Sandy Moody's garage. Meeting was held to plan the disassembly of the dome Saturday, July 3 under the direction of Eagle Scout Candidate Reed Eschmann

b. Upcoming Outreach Event: Sunday, July 11 outreach live event from observatory site and planned ribbon cutting opening Sunday Sep 12<sup>th</sup>

**D. Library Telescope Committee**

a. Budget - \$300, balance \$235

b. Upcoming builds or maintenance events

c. Maintenance budget - \$100, balance \$35

d. Mileage re-imbursement - see above

e. Promotional materials - \$200

**E. SLAS Social Events**

a. Budget - \$300, balance \$300

b. Homemade Fest - \$100 budget

**c. Star-B-Q - \$200 budget**

Star-B-Q planned for Saturday August 21<sup>st</sup> at Alta Picnic Shelter at Babler State Park 3pm - Picnic begins 4pm-6pm Food line open 5pm-6pm Trivia Contest (with prizes) 6pm-7pm- cleanup shelter 7:49 Sunset Move to Monument Area 8pm-midnight- Observing at Monument Area Special Note: There will be solar viewing during the day

**F. SLAS Brochures** a. Budget \$200, balance \$200 move some toner cartridges to this budget b. Quarter cards - plenty in stock, no new ones needed.

**Loaner scope Program** a. Budget - \$100, balance \$100 b. New donations - Meade 4.5" computerized reflector c. Replacement Parts for the LPTs - d. Items for sale several: Meade 4.5" computerized reflector, 2 - 4.5" Newtonian equatorial telescopes. One Meade, one B&L, Criterion 6" long focal length Newtonian and mount, 8" Newtonian with finder, 4 surveyor type tripod

**H. SLAS Library** a. Budget - \$500, balance \$366 b. Other -

**I. Merchandise**

**J. Telescope Making**

**K. Newsletter** a. Budget \$600, balance -\$40

**L. Website** - a. Budget \$690, balance \$510

**M. Social Networking** SLAS Private FB - 73 members SLAS Public FB - 1560 followers

**N. Night Sky Network**

**O. SLASdialogs** SLASDialogs - 154 members

**P. Dark Site**

**Q. Observing Programs**

**R. Star Parties Donation:**

**11. Closing Activities** Motion to adjourn made by Brad W., second by John N. Meeting adjourned at 8:37pm



**St. Louis Astronomical Society  
Profit & Loss Budget vs. Actual  
January through July 2021**

	Jan - Jul 21	Budget	\$ Over Bud...
<b>Ordinary Income/Expense</b>			
<b>Income</b>			
Events Income	1,165.00		1,165.00
Magazine Subscription	2,325.70	1,269.95	1,055.75
Membership Dues	3,035.00	2,435.00	600.00
<b>Total Income</b>	<b>6,525.70</b>	<b>3,704.95</b>	<b>2,820.75</b>
<b>Cost of Goods Sold</b>			
Magazine Subscriptions	2,284.55	1,235.95	1,048.60
Merchandise	85.92		
<b>Total COGS</b>	<b>2,370.47</b>	<b>1,235.95</b>	<b>1,134.52</b>
<b>Gross Profit</b>	<b>4,155.23</b>	<b>2,469.00</b>	<b>1,686.23</b>
<b>Expense</b>			
1-Programs & Events	1,115.98	1,824.00	(708.02)
2-Newsletter	640.02	425.00	215.02
3-Library expense	366.70	300.00	66.70
4-Astronomical League D...		860.00	(860.00)
5-Loaner Scopes		75.00	(75.00)
6-Brochures		175.00	(175.00)
7-Insurance	1,049.50	1,050.00	(0.50)
8-Website	239.39	690.00	(450.61)
9-Administrative Expenses	306.16	285.00	21.16
<b>Total Expense</b>	<b>3,717.75</b>	<b>5,684.00</b>	<b>(1,966.25)</b>
<b>Net Ordinary Income</b>	<b>437.48</b>	<b>(3,215.00)</b>	<b>3,652.48</b>
<b>Other Income/Expense</b>			
<b>Other Income</b>			
Donations	365.25		365.25
Interest Income	10.11	29.00	(18.89)
LTP Receipts	50.77		50.77
<b>Total Other Income</b>	<b>426.13</b>	<b>29.00</b>	<b>397.13</b>
<b>Other Expense</b>			
LTP Disbursements	554.74		554.74
<b>Total Other Expense</b>	<b>554.74</b>		<b>554.74</b>
<b>Net Other Income</b>	<b>(128.61)</b>	<b>29.00</b>	<b>(157.61)</b>
<b>Net Income</b>	<b>308.87</b>	<b>(3,186.00)</b>	<b>3,494.87</b>

**St. Louis Astronomical Society  
Balance Sheet  
As of July 31, 2021**

	Dec 31, 20	Jul 31, 21
<b>ASSETS</b>		
<b>Current Assets</b>		
<b>Checking/Savings</b>		
Checking - First Bank	7,587.88	8,988.70
Deposit, Certificate of	15,925.53	15,933.26
Library Telescope Escrow	1,206.41	813.53
PayPal	747.44	49.18
Savings - First Bank	41,145.74	41,148.12
<b>Total Checking/Savings</b>	<b>66,613.00</b>	<b>66,932.79</b>
<b>Other Current Assets</b>		
Inventory Asset	761.53	675.61
Undeposited Funds	0.00	75.00
<b>Total Other Current Assets</b>	<b>761.53</b>	<b>750.61</b>
<b>Total Current Assets</b>	<b>67,374.53</b>	<b>67,683.40</b>
<b>Fixed Assets</b>	<b>15,336.00</b>	<b>15,336.00</b>
<b>TOTAL ASSETS</b>	<b>82,710.53</b>	<b>83,019.40</b>
<b>LIABILITIES &amp; EQUITY</b>		
<b>Equity</b>		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	72,581.69	74,212.87
Net Income	1,631.18	308.87
<b>Total Equity</b>	<b>82,710.53</b>	<b>83,019.40</b>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>82,710.53</b>	<b>83,019.40</b>

**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](mailto:newsletter@slasonline.org)**

## SLAS Events

### 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.**  
Sep 2, Oct 7, Nov 4, Dec 2

**Dark Sky Observing Dates**  
Sep 4, Oct 2, Nov 6, Dec 4

**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  
On hold until further notice due to Covid 19

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

**Broemmelsiek Astronomy Park Public Viewing**  
Every Friday

**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.

*Apologies for the incompleteness of this events list. At this writing, the Night Sky Network calendar is down for maintenance, so I didn't have the opportunity to add events for this month.*

#### August

20 Fri SLAS Regular Meeting  
21 Sat ANNUAL SLAS STAR-B-Q  
22 Sun Solar Sunday  
23 Mon Constellation Tour 54  
26 Thur SLAS New Member Zoom  
29 Sun Solar Sunday

#### September

2 Thur SLAS Board meeting  
4 Sat SLAS Dark Sky Observing  
5 Sun Solar Sunday  
6 Mon Constellation Tour 55  
11 Sat Bridgeton Night Under the Stars

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](http://www.headznthreadz.com)

There is now only one location:  
1065 Regency Parkway, St. Charles MO 63303  
Telephone: 314.528-8100  
[sales@headznthreadz.com](mailto: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](http://www.Infini-tees.com)**

# 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 @ \$43.95 / 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, 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

<b>President</b>	<b>Jim Small</b>	314-307-0692
president at slasonline.org		
<b>Vice President</b>	<b>Bradley R Waller</b>	314-481-7250
vicepresident at slasonline.org		
<b>Secretary</b>	<b>Mark Jones</b>	636-394-2342
secretary at slasonline.org		
<b>Treasurer</b>	<b>Bill Winningham, (Don Ficken - membership)</b>	636-357-2763
treasurer at slasonline.org		
<b>Hospitality</b>	<b>Larry Campbell</b>	636-244-2867
hospitality at slasonline.org		
<b>Board Members at Large:</b>		
	<b>John Newcomer</b>	314-496-4636
board22 at slasonline.org		
	<b>Tom Nickelson</b>	314-346-9565
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***Devoted to the Interest and Advancement of the Science of Astronomy***

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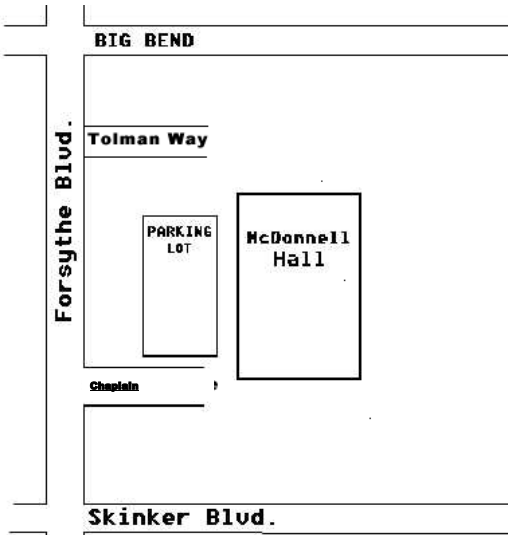


**Who We Are and What We Do**

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.



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