

THE EVENT HORIZON



ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

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Mapping Millions of Galaxies and Quasars – The Sloan Digital Sky Survey *by* **Larry Bartoszek** **Bartoszek Engineering**

Larry Bartoszek of Bartoszek Engineering will be featured at the September meeting of the Saint Louis Astronomical Society. The meeting will be held online, via Zoom. Zoom access information is posted below. The meeting will start at 7:30pm on Friday, September 17.

The Sloan Digital Sky Survey (SDSS) uses a new telescope at Apache Point Observatory near Alamogordo, New Mexico to map the night sky in great detail. It produces both regular images and spectra – starlight and galaxy-light spilt into their component colors. It does its mapping with a 120 megapixel digital camera and two spectrographs. SDSS has created a three dimensional map of the sky with a million galaxies and qua-

sars. Mr. Bartoszek will discuss the Survey and explain how data collected by SDSS has provided insights into dark matter and dark energy, as well as visible galaxies and quasars. All of the SDSS data is available on the web, for use by amateur and professional astronomers and the general public.

Mr. Bartoszek is an Illinois Licensed Professional Engineer and owner of Bartoszek Engineering. His consulting firm specializes in the design of nuclear and high energy physics facilities, both here and abroad. Mr. Bartoszek worked at the Fermi National Laboratory from 1983 to 1993. While there, among many projects involving sub-atomic particle accelerators, he designed the pneumatic latches that hold the \$4 million dollar CCD camera and the spectroscopes to the bottom of the SDSS telescope.

Upcoming Meetings 2021

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

The SLAS owned Captain James M. Moody Observatory had it's Grand Opening at the Jefferson College Observatory complex last Sunday! See page 2!

President's Corner by Jim Small

Wow... What a month! The 16" Meade was installed in the dome. We got a halfway decent alignment completed and thoroughly enjoyed the initial viewing! First light was Saturn of course! (We had no Moon that night). The eyepiece we preferred for the night was my Meade 40mm 68 deg field 2" eyepiece. We alternated views with that and with the 2" 2x barlow from Explore Scientific. Views produced were 100x and 200x. We then progressed to Jupiter, M22, M6, M7, M8, M13, M11, M17, M57 and M31. We looked at a few other objects then ended the evening with the double cluster. It barely fit! Needless to say, the views were terrific, even with the poor seeing and transparency.

Fast forward to Sunday, September 12. After a ton of GREAT work by Don Ficken, the contractors and team at Jefferson College, the patio and sidewalk was poured and the electrical outlets were activated. The patio has 9 quad outlets with a quad of USB ports each for charging. It's a terrific setup! With the patio and surrounding area seeded and strawed, everything was set for the Grand Opening!

The college set up tables, chairs and the podium for the event and various groups set up exhibits for viewing before

the ribbon cutting. With everything set up, we all got to enjoy perfect weather and a great crowd for the event! I can't wait to do more public events!

We are in the process of setting up training for the dome and scope for operation by a few members. Once the training is complete, we will have several members who can open and operate the dome for use. We are headed to the dome Sunday night for an initial use and some training. You are welcome to come by and join us if you like! We are adding some equipment to the dome, including a nice stepstool and a couple of comfy stools to use while working. There is also a convenient cart to use for computer equipment, etc.

The patio is open for use by the public. You may bring your equipment and set up when you like (unless a class is using the patio). If you come down, be sure you notify the Jefferson College Police that you are setting up so they are aware. Their number is (6360) 481-3500.

Apologies for the delay in the newsletter. I am learning how to install and initialize a new hard drive in my laptop. It seems the cheap ssd drive that was there simply died overnight after I closed the laptop to put it to sleep. Dead. Nothing on it. Wasn't even recognized. So if you need help to do a clean install of windows on a new hard drive after this, I'll be able to help! ***sigh***
Jim Small

The Grand Opening of the Jefferson College Observatory September 12, 2021

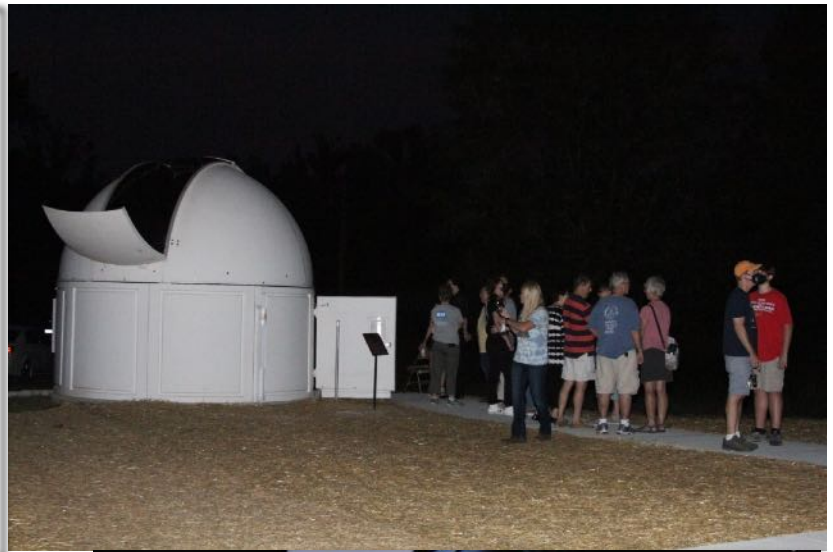
The Captain James M. Moody Observatory owned by SLAS and the Jefferson College Observatory were officially opened September 12. The observatory is located next to the parking lot for the softball field on the observatory campus. The opening was well attended by 150-200 people. There were exhibit tables by local libraries, Jefferson College, Missouri IDA, and SLAS. Dr. Dena McCaffrey, President of Jefferson College and Jim Small, President of SLAS gave opening talks and welcomes then participated in the ribbon cutting along with the Moody family and others involved in getting the project completed. The rest of the evening was dedicated to exploring the site and the exhibits along with the observatory itself. There will be a special edition of the newsletter released

which will have a complete rendition of the entire project and its development later. Meanwhile, here is a small collection of photos from the Grand Opening! Enjoy!





This is just a sampling of the pictures from the Grand Opening. A full set will be published in a special observatory edition of The Event Horizon to be published with a complete timeline later this month!



Four St Louis Amateur Astronomers Went to the Rocky Mountain Star Stare (RMSS), Sep 2-6, 2021

by
Mark Jones

Bill Biermann, Mark Jones, Jack Gillette, and Bill Neubert



We had 4 nights of observing, Thursday to Sunday. On Wednesday morning we packed and left St Louis early, arriving in Colorado Springs about 9pm local time. We picked up a rental RV and stayed overnight in Colorado Springs. Next morning we drove 2 hours west to the RMSS site.

The Colorado Springs Astronomy Club owns about 35 acres in a valley between 2 mountain ranges. The val-

ley is at an altitude 7700 feet, and the climate is very dry with no lights visible.

Night #1 - We had clouds to south on first night which dampened our early view of the Milky Way. The light pollution was so small that clouds always appeared darker than the sky itself. The stars really did shine between the gaps in the clouds. Clouds would thicken and we even had a brief shower, then clouds thinned and about midnight and covered most of the sky. Only Jupiter was bright enough to burn through the clouds. We turned in about 1:30am when it did not look like clouds would dissipate.

Night #2 - mostly clear skies to start of night, with



thunderstorms along the mountain range to our north. Almost continuous lightning from these storms illuminated our site. We were able to continue observing and photographing until midnight when clouds descended and moved toward our site. No rain but heavy dew and fog before sunrise as the site was enveloped in clouds. These burned off at morning light.

Day #3 - 86 year-old Dr Harrison "Jack" Schmidt from Apollo 17, one of only 4 living moonwalkers, gave a very interesting talk.

Jack was very energetic and friendly and would shake hands and pose for photos. I spoke to his wife Teresa before the talk. She and Jack have been married 37 years, both were bachelors when they met. They have no kids but enjoy the outdoors. They live in New Mexico where Jack was born, and Jack still takes the dog out for morning hikes. Teresa said that Jack is disappointed the US hasn't been back to the Moon yet, but is looking forward to that day. Side note, there were many children there and Dr Schmidt bought special gift packets for each one, he would smile and sparkle when he was around the kids.

Night #3 - clear skies all night. Milky Way extended from Sagittarius through Perseus and later through Gemini after midnight. Naked eye the star clouds and rifts in the Milky Way were very distinct. M31 covered the entire field in 10x50 binoculars, M33, the Veil and Helix nebulae were also visible. Skies were still clear when we stopped around 2:30am with Orion rising in east.

Night #4 - the forecast was that night 4 would be the best night and it was. Skies were clear all night. We saw Venus with Spica underneath after sunset. Once again we stayed up till about 3am. Jack Gillette left his camera taking time-lapse of Gemini though sunrise and, I think, Jack captured the Zodiacal Light as morning approached.

We packed up Monday morning (Sep 7th) dropped off the RV and drove back to STL, arriving about 2am Tuesday morning. A special thanks to Bill Biermann for driving to Colorado with all our equipment and renting the RV. Great planning Bill



A Great Evening for Stargazing at Francis Park!

The initial forecast for September 15 was unfavorable, but as the event date approached, the forecast improved greatly, and it turned out to be perfect weather for observing. We had a 9-day old waxing gibbous Moon. We also had the best possible planets up for observing - Jupiter and Saturn, and Venus as a bonus! The atmosphere was surprisingly transparent as well, giving us stunning views of Jupiter and all four Galilean moons, and the rings of Saturn. Viewers counted up to six moons of Saturn visible!

The pandemic prevented us from hosting this event until June 2021, but since then we have been able to hold all four scheduled events. We are certainly making up for lost time under the stars! A great evening was had by all, and we had about 200 visitors to this event. See you in October!
Bill Breeden - St. Louis Astronomical Society



Above: Milky Way from the Rocky Mountain Star Stare. Photo by Mark Jones

SLAS Star-B-Q Leads to Unusual History by Grant Martin

This years' SLAS picnic was remarkable in a number of ways.

First is the fact that we were able to meet in person after the year that wasn't. It's been a long time since we could do that.

Second was the HUGE spread that was put on! There was something for everyone and it was ALL good!

Third was the fact that our illustrious and illuminous president was thinning out donated equipment and brought a large selection of goodies at yard sale prices (See prior Event Horizons' for images of what was available).

Amongst all this treasure, was a 6 inch, f[big#] OTA (Optical Tube Assembly). Ok, it looked like a run-of-the-mill OTA for sure. Until one noticed the old tarnished brass plate.

A little spit (literally) revealed that it had been donated to Washington University in 1955! Well shoot, I was BORN that year so this made the scope at least 67 years old. How about that! People were milling around it curious about the tag and not much else. No one made an offer on it so it wound up in the back of my HHR after a bit of horse tradin with Jim.

So I get home and unloaded most of the car including the scope. I was pretty well bushed and looking for some lengthy sack time but I just had to polish up that tarnished placard to see what was inscribed thereon.

It didn't take long. The photo on the right shows the results.

So yeah, it was donated to Washington University by Mr. and Mrs. Ben C Comfort in 1955. Cool, but, Off to Bed

But mysteries ALWAYS prevent sleep and since I have a little laptop near my bed, I did a quick search for "Mr. and Mrs. Ben C Comfort". I got several hits all referring to an event that occurred in 1935

I c.o.u.l.d. n.o.t. believe what I was reading. The specific event was the competition for the Wimbledon cup during the 1935 National Match at Camp Perry. I won't go into detail here except to say that the Wimbledon trophy is

awarded to a shooter that gets the highest score shooting at targets one thousand yards away. THAT aint easy at tall - It takes a LOT of practice and skill to do that and only 20 or so competitors make it to that firing line at the match. Here's the link if you'd like to read about it:

[Shooting Sports USA | Wimbledon Cup History: Ben Comfort's Controversial Sighters \(ssusa.org\)](http://ssusa.org)

As far as I/we can tell,

(Continued on page 6)



*Presented to
Washington University
By
Mr. and Mrs. Ben C. Comfort*

(Continued from page 5)

the Ben C. Comfort that donated this scope to Washington University is the same Ben C Comfort (Pictured a right WITH The Cup) that set the astounding records in 1935.

I sent several emails to key members of SLAS revealing this information and Mark Jones sent this nice article from the July 20, 1955 St Louis Globe Democrat (lower right) about the donation (Does that July 20th date ring a bell?).



I did more digging but didn't come up with much more than more questions.

To begin with, the back of the mirror has a typical "Clausing" sticker on it (left). I'm wondering for what period of time these were used as it IS different from all the recent (> 1965) Clausing coated mirrors I've run across.

It was also inscribed "SKSTLM

52 1/2" Usually done to identify the mirror before it is coated or recoated. A guess at decoding would be the "SK" are the initials of customer in "STLM" (Saint Louis Missouri). The "52 1/2" is most likely the measured focal length of the mirror. Since the mirror is six inches in diameter, that would make the f-ratio 8.75 – which is VERY close to

whole thing got - ALMOST a Criterion RV-6 f8, but just different enough to prevent a confirmed identification.

Considering the "\$1500 Custom made telescope" snippet in the article Mark found, my initial opinion is that this scope started life as components (with many from Criterion) and assembled into a unique instrument suitable for University use. There are also many indications that the scope has been refurbished and modified over time into what we have today.



what I measured mechanically.

The focuser has "CRITERION" molded into the casting so I did some research into Criterion the company and its original offerings. After making comparative measurements, the more data I got, the more "Frankensonian" this

I am certainly wondering how I/we can pursue this search with Washington University. It will be interesting to find out what was this donation all about and if there are any more details about it.

So yeah, a pretty remarkable picnic once again. Oh, and as unbelievable as it may sound, I had top score for the trivia contest this year. Now ain't THAT Remarkable!

G.

The Saint Louis Amateur Astronomical Society!
by
Grant Martin

So Mark Jones found a neat picture in the Sept 3, 1939 Globe-Democrat. It was a dark and grainy image of six amateur astronomers and their scopes 82 years ago. "1939 huh? That sounds familiar" I says to myself. And then it dawned on me "HEY, that's only 3 years after the founding of the "Saint Louis Amateur Astronomical Society" (SLAAS) in 1936 - the immediate predecessor to us!



The St. Louis Amateur Astronomical Society holds a get-together meeting right out under the stars in a member's back yard. The amateur astronomers make their own telescopes and do their planet-gazing strictly for the fun of it. Searching the heavens here are Dr. C. W. Schery, 529 Whittier; Robert Gomien, 1910 Tower Grove; Owen McNamee, 2314 University; Earl Bess, 2808 Osceola; A. M. Obrecht, 2913 Park, and Leo Rasche, 4232 Clarence. The society was started in 1935, and the members have been steadily seeing stars ever since. Although many astronomy-minded persons are liable to be scared off by mistaken ideas about the expense of the thing, some of the home-made 'scopes you see here were built at an actual money cost of less than \$5. The investment draws sky-high interest for all.

I copied the image (you know, a copy of a copy of a copy . . .) and put it through PaintShop Pro to make it a little easier to identify these folks (Of which the only names I recognize are Bess and Obrecht) and to try to extract more detail of their equipment (I LOVE seeing the old "DIY" stuff).

The original image shows some kind of weirdness with the "scope" that Dr. Schery and Mr. Gomien are looking through on the far right. I mean really, is that some kind of weird right-angle eyepiece extender from the reflector that Mr. Gomien is looking through and what the heck kind of thing does Dr. Schery have there??? It sure looks like that scope has TWO optical paths to look through (Maybe a "training" scope?). But post image-enhancement, shows that Dr. Schery has an equatorially mounted reflector while Mr. Gomien is peering into a tripod mounted refractor in the background (*WHEW*).

Mr. Bess has a neat looking pipe based fork mount and what the heck is that circular "Plate" on the end of the vertical shaft in Mr. Rasche's mount? A vibration dampener? I've tried that kind of thing and it really works well!

Too bad they're not all accurately equatorially aligned 😊 this must be a pre-observing session photo op 😊
And the ties! This was when observing was a nearly formal affair!

Last but not least, as mentioned, this photo is a few years after the formation of SLAAS so you KNOW I'm gonna be digging through our old records.

Of these six individuals mentioned, Dr. Schery, Mr. McNamee, and Mr. Obrecht first appear in 1936 in the "SLAAS Founders Journal" (an accounting and membership ledger). Mr. Bess and Mr. Rasche appear in 1938 and Mr. Gomien is first shown as a member in 1939.

So yeah, here's a picture of a few of our founders for sure. G.

**St. Louis Astronomical Society
Devoted to the Interest and Advancement
of the Science of Astronomy
Executive Board Meeting Minutes 8/5/2021**

- 1. Opening Activities a. Attendance:** Bill Winningham, Jim Small, Brad Waller, Larry Campbell, Brent Buch, Mark Jones
- b. Open Meeting** Meeting opened at 7:00 pm
- c. Approval of last month's meeting minutes.** Motion made to approve by Bradley Waller, Second by Bill Winningham, minutes were approved
- d. Next Board meeting date:** Dates for 2021: Sep 2, Oct 7, Nov 4, Dec 2. Meetings will be via Zoom until further notice:

2. Upcoming General Membership meeting topics:

- a. Speaker:** Bob Criss info received
- b. Special Awards needed:**
- c. Speaker Press Release:** Press release not out yet but coming soon
- d. Special Business needed:** None
- e. A101:** Observatory update

3. SLAS Financial Report

- a. Balance Sheet** Total assets YTD increased from \$82,710 to \$83,019
- b. Profit/Loss report** – We budgeted an income loss of \$3186, but we are underspending our budget, our net Income YTD is \$308
- c. Annual Budget meetings** – Start in September
- d. Corporate filings:** Due and filed in August

4. Speaker Committee

- a. Budget - \$400, balance \$393
- b. Upcoming speakers: see list below

SLAS Monthly Meetings Presentations 2021

Month	Name	Topic	Sponsor
20-Aug-2021	Robert Criss, PhD		Galactic Rotation & Dark Matter
17-Sep-2021	Larry Bartoszek, PE		The Sloan Digital Sky Survey Telescope
15-Oct-2021			TBa
19-Nov-2021			V ger speakers
17-Dec-2021			TBA

- c. Open dates for 2022 all but Feb,
- d. Topics of interest James Webb Space Telescope, Event Horizon Katie Bouman

5. Membership Initiatives

- a. Budget - \$450, balance \$179
- b. Welcome Aboard Meetings
- c. Raffles – none planned at this time
- d. Attendance prizes this month – next prizes are September (equinox)

6. Membership Recognition

- a. Total Budget \$420, balance \$329
- b. NSN Outreach Awards: Awards and pins are presented 1Q year new year
- c. Membership Report: The SLAS membership report for July 2021 show 227 members. We are 16 members over the start of this year and 45 members over the 182 members reported last year for July. Our growth is related to adding new members, particularly family memberships, which is partially offset by lost memberships.
- d. Member anniversary awards – planned for December
- e. New Award program - \$600 budget, balance \$340
 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 May 1st, was extended to July 1st in 2021
 4. Nomination reviews: Committee meeting to be set up by Larry C.
 5. Award selection: Aug 1st
 6. Plaques purchased: Perpetual plaque will be picked up by the meeting.
 7. Awards presented: September meeting

7. Outreach -

- a. Budget - \$700, balance \$677
- b. Member Training Program Status: on hold for the time being.
- c. NSN Outreach hours 109 hrs YTD

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

9. New Business:

a. MSRAL 2022: Set and approve dates for the convention. Tentative dates will be June 10-12 at Washington University. In the process of contacting professors at Washington University now for coordinating use of facilities on campus for the meetings. June 11 is ASEM meeting, send email to Jim Twelman. Mark sent email to ASEM asking if they could shift their meeting date.

b. Proposal for new committee made by member Dave Wrobel. The new committee's mission - Survey other club websites, perhaps with an initial focus on those in close proximity to JPL and NASA in Houston. Also - <https://www.astroleague.org/astronomy-clubs-usa-state>. Ask members for suggestions if they, like me, had once belonged to another club. Survey club members for premium services and sites to determine if discounted or free services/access might be available if acquired thru the club and its website.

Board reviewed the proposal and has questions for Dave. Topic tabled until next meeting

10. Other Committee Reports: As needed

A. SLSC Business: a. First Friday actions: No dates planned. Solar Sundays have been cancelled due to COVID b. Other immediate business none

B. SLCL Business: a. Annual contract – Contract signed and dates set in July, however, SLCL decided on Aug 9th to cancel in-person programs through end of year 9-2021 email from SLCL I'm Sarah Jones, Adult Programming Coordinator at St. Louis County Library. Rebecca asked me to reach out to you about the scheduled branch Star Parties. We learned today that the library's leadership has decided not to move forward with in-person programs with outside organizations through the end of the year. Our branches are updating their program schedules accordingly. We're sorry to have to cancel the following programs: GV - September 16 FV-October 14 HQ-November 8 DB - December 8

C. Jefferson College Business:

a. Committee Meeting report: Dome is up on Jefferson College campus. College approved spending for Phase 2 of project that include the patio and sidewalks. b. Upcoming Outreach Event: Aim for Stars Aug 8th. Ribbon Cutting Ceremony Sep 12th c. Balance: \$664

D. Library Telescope Committee

- a. Budget – \$300, balance \$235
- b. Upcoming builds or maintenance events
- c. Maintenance budget - \$100, balance \$35
- d. Mileage re-imburement – see above
- e. Promotional materials - \$200, balance \$200

E. SLAS Social Events a. Budget - \$300 b. Homemade Fest - \$100 budget c. Star-B-Q - \$200 budget, balance \$200 **Star-B-Q planned for Saturday, August 21st at Alta Picnic Shelter at Babler State Pk**

Other

F. SLAS Brochures a. Budget \$200, balance \$200 b. Quarter cards

G. Loaner scope Program a. Budget - \$100, balance \$100 plus receipts from telescopes sold \$670 + \$1165=\$1835

H. SLAS Library a. Budget - \$500, balance \$133

I. Merchandise

J. Telescope Making

K. Newsletter a. Budget \$600, balance -\$40 (toner for brochures)

L. Website - a. Budget \$690, balance \$450

M. Social Networking

N. Night Sky Network

O. SLASdialogs

P. Dark Site

Q. Observing Programs

R. Star Parties Donation:

11. Closing Activities Motion to adjourn by Mark second by Brent meeting adjourned at 8:55pm

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

	Jan - Aug 21	Budget	\$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	1,275.00 ¹		1,275.00
Magazine Subscription			
Astronomy Magazine Sales	1,153.15	612.00	541.15
Sky & Telescope Sales	1,362.45	790.80	571.65
Total Magazine Subscription	2,515.60	1,402.80	1,112.80
Membership Dues	3,400.00	2,700.00	700.00
Total Income	7,190.60	4,102.80	3,087.80
Cost of Goods Sold			
Magazine Subscriptions			
Astronomy Magazine Cost	1,156.00	578.00	578.00
Sky & Telescope Cost	1,230.55 ²	790.80	439.75
Total Magazine Subscriptions	2,386.55	1,368.80	1,017.75
Merchandise	85.92		
Total COGS	2,472.47	1,368.80	1,103.67
Gross Profit	4,718.13	2,734.00	1,984.13
Expense			
1-Programs & Events	1,336.56	2,218.00	(881.44)
2-Newsletter	640.02	460.00	180.02
3-Library expense	366.70	300.00	66.70
4-Astronomical League Dues	955.00	860.00	95.00
5-Loaner Scopes		75.00	(75.00)
6-Brochures		200.00	(200.00)
7-Insurance	1,049.50	1,050.00	(0.50)
8-Website	239.39	690.00	(450.61)
9-Administrative Expenses	327.28	321.00	6.28
Jefferson College Observatory	181.67		
Total Expense	5,096.12	6,174.00	(1,077.88)
Net Ordinary Income	(377.99)	(3,440.00)	3,062.01
Other Income/Expense			
Other Income			
Donations	365.25		365.25
Interest Income	22.95	33.00	(10.05)
LTP Receipts	61.02		61.02
Total Other Income	449.22	33.00	416.22
Other Expense			
LTP Disbursements	554.74		554.74
Total Other Expense	554.74		554.74
Net Other Income	(105.52)	33.00	(138.52)
Net Income	(483.51)	(3,407.00)	2,923.49

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

	Dec 31, 20	Aug 31, 21
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	7,587.88	5,693.95
Deposit, Certificate of	15,925.53	15,945.74
Library Telescope Escrow	1,206.41	813.53
PayPal	747.44	538.71
Savings - First Bank	41,145.74	41,148.48
Total Checking/Savings	66,613.00	64,140.41
Other Current Assets		
Inventory Asset	761.53	675.61
Investment in Mid-States 2...	0.00	2,000.00
Undeposited Funds	0.00	75.00
Total Other Current Assets	761.53	2,750.61
Total Current Assets	67,374.53	66,891.02
Fixed Assets	15,336.00	15,336.00
TOTAL ASSETS	82,710.53	82,227.02
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	72,581.69	74,212.87
Net Income	1,631.18	(483.51)
Total Equity	82,710.53	82,227.02
TOTAL LIABILITIES & EQUITY	82,710.53	82,227.02

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 astrophotos? Please submit!

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

Send to 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.**
Oct 7, Nov 4, Dec 2

Dark Sky Observing Dates
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.umsi.edu/~physics/About%20the%20Department/astro.html>

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

Skywatch Hotline: 314-516-5706

Saturdays:

September

20 Mon Sukkot Under the Stars
20 Mon Constellation Tour 57
25 Sat Night Skies over Babler
27 Mon Cosmic Connections

October

2 Sat SLAS Dark Sky Observing
3 Sun Aim for the Stars (Jeffco)
4 Mon Constellation Tour 58
5 Tue Rock Hill Star Party
7 Thur SLAS Board Meeting
9 Sat Girl Scout Camp
11 Mon Constellation Tour 59
12 Tue The Birth and Death of Stars
12 Tue Manchester Parks
13 Wed DeSoto Public Library Star Party
13 Wed Francis Park
15 Fri SLAS Regular Meeting
16 Sat Stargazing at the Arch
18 Mon Constellation Tour 60
21 Thur Stellar Soiree

November

1 Mon Constellation Tour 61
4 Thurs SLAS Board Meeting
6 Sat SLAS Dark Sky Viewing
7 Sun Aim for the Stars (Jeffco)
8 Mon Constellation Tour 62
15 Mon Scott Library Star Gazing
15 Mon Constellation Tour 63
19 Fri SLAS Regular Meeting
22 Mon Constellation Tour 64

December

2 Thur SLAS Board 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!

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 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 _____

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

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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)	636-357-2763
treasurer at slasonline.org		
Hospitality	Larry Campbell	636-244-2867
hospitality at slasonline.org		
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board22 at slasonline.org		
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Devoted to the Interest and Advancement of the Science of Astronomy

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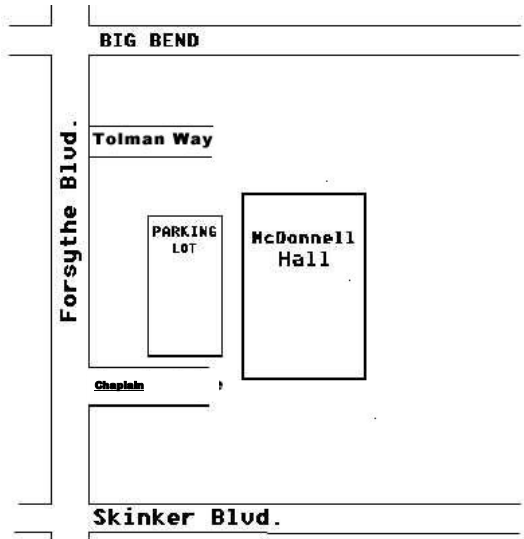


Who We Are and What We Do

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.



St. Louis Astronomical Society

Jim Small
13128 Cozyhill Drive
St. Louis, MO 63122

