THE EVENT HORIZON

ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

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Astronomy of the Inka Empire

by

Dr. Steven Gullberg
University of Oklahoma

Dr. Steven Gullberg of the University of Oklahoma will be joining us in person at the June meeting of the Saint Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, June 21 in **Wilson Hall, Room 214**, on the Danforth campus of Washington University, Saint Louis, MO 63105. Wilson Hall is accessible from Forsyth Boulevard via Tolman Way, behind the Somers Family Hall.

The Inca people (they prefer to be known as "Inka") dominated the western coast of South America from about 1400 A.D. until their conquest by Spain in 1533 A.D. Astronomy in the Inka Empire was a robust and fundamental practice. The Spanish conquest of the Andes region disrupted much of this Indigenous culture and resulted in a significant loss of information about its rich history. Modern archaeoastronomy – the study of the astronomy of ancient cultures - helps to recover and interpret some of these elements of Inka civilization.

The Inkas worshipped the Sun, and astronomy was intricately woven into the fabric of their existence and daily life. Dr. Gullberg will present some historical background and then look at the intentional light and shadow effects created in numerous Inka shrines and caves. Photos captured during field research in places such as Machu Picchu, the Sacred Valley, and Cusco add visual insight into Inka culture and beliefs.

Dr. Steven Gullberg is a Professor of Cultural Astronomy at the University of Oklahoma. A distinguished teacher and researcher, he is also President of the International Astronomical Union (IAU) Commission C5 Cultural Astronomy. He is Managing Editor of the Journal of Astronomy in Culture. He has conducted extensive field research on the astronomy of the Incas in the Peruvian Andes and has authored books and many research papers on archeoastronomy.

Upcoming meetings:
July 2024: Ashley Davies, PhD. "Juno Close Flybys of Io"; JPL
August: Bradley Tsalyuk, Exhibit Developer, Samuel Oschin Air and Space Center, Ca Science Center
September: Joseph Marcus, MD, ""Who Discovered the Expanding Universe? Spoiler: Not Hubble!"
October Pamela Gay, PhD, "Secret Squirrel Stuff", Planetary Science Institute
November: Robert Zubrin, PhD. "The Case for Mars"; The Mars Society
December 2024: Robert Reeves; "Postcards from the Moon"; LPOD
January 2025: Bhupal Dev, PhD. "Finding New Physics in Debris from Colliding Neutron "Stars; Washington University.

Meeting Room Change: Wilson Hall 214! June 21st Meeting will be In Person and Online!

The meeting will begin at 7:30 PM Friday, June 21st in **Wilson Hall, Room 214**, on the Danforth campus of Washington University, Saint Louis, MO 63105. Wilson Hall is accessible from Forsyth Boulevard via Tolman Way, behind the Somers Family Hall. Free yellow zone and garage parking spaces are available. The event will also be available via Zoom online conference per the link here: **To join with computer or smartphone: use the below link.** **https://zoom.us/j/8604505790?omn=91696112100** **meeting ID: 860 450 5790**

21st Annual SLAS Star B Q, Saturday, 8/3/2024 3:00pm-10:00pm Stacy Park, 9750 Old Bonhomme Rd, Olivette, MO 63132

SLAS will once again provide the Bar-B-Q. Bring your favorite drinks and side dish or dessert. This area has a large shelter, restrooms. We will observe from the soccer fields.

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President's Corner
by Jim Small

Four people from the St. Louis area attended the MSRAL convention held in Omaha, NE June 9 weekend. Myself, Cook Feldman, Larry Campbell and Jim Twellman. It was a great weekend of comradery, talks, and food. The star b q was moved inside the lodge because of thunderstorms but that didn't put much of a damper on the mood of the crowd. The talks Saturday were all excellent as was the banquet that evening. More talks concluded Sunday morning and were also of good quality. About 85 people attended. All in all, a worthwhile weekend! Next years conference will be hosted by Central Arkansas Astronomical Society in Little Rock. More in the next newsletter...

ALCON is also close by this summer and will be hosted by the Kansas City group. July 17-20. Registration is open. The link may be found on the home page at **https://www.astroleague.org/** Perhaps as a result of the expense of the in-person event, ALCON is offering a virtual conference at a price of $100. here is the direct link: **https://www.tickettailor.com/events/astronomicalsocietyofkansascity/1187693#**

As you can tell from the photos in the newsletter, the Air Show was popular the same weekend and star parties at Stacy Park, Tower Grove Park, Francis Park, and the Gateway Arch are all drawing decent crowds. And don't forget about the Jefferson College Observatory as well. Plenty of opportunity to get out there and show the stars to the world. Be sure to log into Night Sky Network and RSVP for some of these events. See the events page for a full list.

I drove down with a car full of telescopes to sell at MSRAL, some of which are being sold by SLAS. In particular, an Orion 180mm Mak-Cas with case and mount, a really nice Celestron C8 OTA and case and a Meade 4.5" reflector See Mark Jones if you are interested in any of these scopes.

AND... The annual SLAS Star B Q will be held Saturday, August 3 at Stacy Park! Can't wait for that

Sincerely, Jim Small

SLAS Memberships Expiring in June

Mark S.	Jones
Stephen	Lebak
Richard K.	Myhra
Keith	Pendleton
Rodney R.	Rynearson

SLAS Memberships Expiring in July

Matthew	Brummund
Benjamin	Daugherty
Cook	Feldman-Martin
Grant	McDaniel
Phillip	Quast
Anabell	Ryan, MD
Thomas	Schloemann
Barbara	Shrauner
Ronald	Sides
John	Simmons
John	Strebeck-Trull
Jim & Ann	Twellman
James	

From the StarBQ Quiz:
Questions for Month #7 SLAS History

7-1. SLAS membership dues are $25/year. In what year did we raise our dues from $20 to $25?
1976 1986 1996 2006 2016

7-2. Our newsletter is named the "Event Horizon" what year did we establish this name?
1970 1980 1990 2000 2010 2020

7-3. SLAS meeting schedule used to follow the academic year and not hold meetings during summer break. The May meeting was our election month followed by no meetings in June-August. June was set aside for MSRAL and August for Star-B-Q and ALCON. Summer break also gave the new President and Board members time to acclimate before Fall. General meetings would start again in September. SLAS now holds general meetings January to Decmber. In what year did we go to the 12 month meeting schedule?
1962 1972 1982 1992 2002

7-4. SLAS prides itself on having high quality speakers for the monthly meetings and these are open to the public. We have had many repeat speakers, donating their time again and again to speak to SLAS. Which person has spoken a record 21 times to SLAS?
Pamela Gay Robert Cox Ray Arvidson
Rich Heuermann Richard Schwartz

7-5. Prior to the opening of the McDonnell Planetarium. SLAS monthlymeetings were held on the campus of St Louis University School of Technology, 3621 Olive Street. In 1955, SLAS worked very hard to promote the funding of a new city planetarium. This effort culminated with a successful Bond Issue in May 1955. As soon as the planetarium opened SLAS moved their monthly meetings to the planetarium. In what year did the McDonnell Planetarium open?
1958 1961 1963 1966 1969|

7-6. SLAS helps support the Library Telescope Program for the St Louis area. Three other astronomy clubs in the area also support the LTP. As of 2023 there are more than 213 telescopes and 131 binoculars available for public checkout. In what year did SLAS kick-off its library telescope program?
2010 2012 2014 2016 2018

7-7. SLAS partnered with Jefferson College to study the feasibility nd funding for building an observatory on the JC campus. Committee meetings began in 2017 right after the 2017 Total Solar Eclipse. Phased construction plans were developed for an community use observing patio, two large roll-off roof observatory buildings, restrooms, a 6 foot donors memorial wall and 11 foot observatory dome. The first phase was completed with an 1800 sq-ft patio and 16" telescope and dome installed. When was the formal ribbon cutting ceremony for this first phase?
Jan 2021 June 2021 Sep 2021 Nov 2021

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Answer #7-1: 1986. Increase in dues was voted on at the October 1986 general meeting and was effective November 1986. S&T yearly rate was $14.50 in 1986. Answer #7-2: 1990. The May 1990 was the first issue titled Event Horizon.
Answer #7-3: 1992 Answer #7-4: Rich Heuermann 21 times; Pamela Gay 7; Bob Cox 11; Ray Arvidson 8; Richard Schwartz 14
Answer #7-5: 1963. SLAS held their first meeting there in April 1963 and they were held there most of the time until 1983, when the planetarium closed for major renovation. Then 1985 to 1993. In late 1993 we moved to Washington University, where we will still meet. Answer #7-6: 2014. SLAS had its first library telescope build on Oct 4, 2014. The day, 23 SLAS members modified 18 Orion telescopes, that were delivered to local libraries. Answer #7-7: The ribbon cutting ceremony was Sep 12, 2021.

Three-in-One Astronomy Outreach!

by Bill Breeden

Tower Grove Park, Stacy Park, and Francis Park Stargazing Reports, April 13-17, 2024

ST. LOUIS, MO – The 2024 astronomy outreach season is off to a fantastic start! I tip my hat to those astronomers that power through the winter months, but my astronomy outreach season starts in April. The total solar eclipse kicked off our 2024 observing season, and my experience was amazing. My wife and I, along with Cook and Carol Feldman, traveled to see totality in Ava, Illinois with the River Bend Astronomy Club. I will let others report on the eclipse, at least for now.

Our outreach season opened up with Cook Feldman's event at Tower Grove Park on April 13. Perfect weather, good friends, and excited visitors made for a wonderful night under the stars. We focused on the First Quarter Moon, Jupiter, and the double star Mizar. There is a wide open field near the Stone Shelter in the park, and it makes for a great outreach location. Cook works with park staff to set this event up for us, and it is always well-attended. Visitors bring chairs, blankets, picnics, and their enthusiasm for urban stargazing. We had about 80 visitors.

All set up for an evening of astronomy outreach at Tower Grove Park. Photo by Bill Breeden.

The very next night, April 14, we met up with Ken Levy at Stacy Park in Olivette. Ken works with the city of Olivette to set this up for us, and it is destined to become one of our most popular regular outreach events. Stacy Park is designated an Urban Dark Sky Site, and stargazing is permitted on the baseball outfield on any night. On Sunday, we pointed our telescopes at the First Quarter Moon, Jupiter, and Mizar. Cook Feldman presented outstanding views of the Great Orion Nebula (M42) using a narrow band filter. We had an astounding eleven telescopes set up, and I would estimate about 30 visitors. One visitor ventured all the way from Boston, and learned about this event while searching online for nearby astronomy events while in town.

Ken Levy, SLAS Lead for Stacy Park Stargazing, sets up his telescope for outreach. Photo by Bill Breeden.

Three days later, on April 17, we held our first Francis Park Stargazing event for 2024, and it was an amazing success! Weather blessed us with clear skies and mild temperatures for our 20 year anniversary in the park, and we had a mind-blowing 250 visitors. We pointed our telescopes at the Waxing Gibbous Moon, Jupiter, Mizar, M42, and the Beehive Cluster (M44). Some visitors even brought their own telescopes to try out; it's always fun to see that! I had a chance to show the Moon with my 32mm Plossl (63x), which shows the whole Moon in the field of view. The Sun was still above the horizon, so I set up SLAS's Sunspotter, which showed no fewer than 18 sunspots on the Sun's surface. Once the sky darkened, I changed to my 15mm Plossl eyepiece (133x), which shows a nice close-up of craters. A red filter on the Moon always impresses the kids (and adults LOL). With three successful outreach events in a row, 2024 is off to a great start!

All set up for an evening of astronomy at Francis Park. Photo by Bill Breeden.

Clear Skies!

----Bill Breeden

2024 Spirit of St. Louis Airshow Report *by* Don Ficken

Volunteers for the St. Louis Astronomical Society and DarkSky Missouri, thank you for your volunteering for the 2024 Spirit of St. Louis Airshow. It was a fun day and everyone did a great job!!! For photos of our booths in action and select photos of planes in the Airshow, please visit this Flickr page: https://flic.kr/s/aHBqjBusR2

The airshow was sold out both days (50,000 projected attendance for the weekend). Each day started with rain and clouds but turned sunny in the afternoon. We were steady busy all day – no real lulls or extra busy times. We had two different booths: One for the St. Louis Astronomical Society; and another for DarkSky Missouri/Lights Out Heartland.

12 volunteers supported both booths. St. Louis Astronomical Society booth was supported by volunteers from the St. Louis Astronomical Society booth: Alec Faum, Mike Hoke, Rich Jennings, Rick Menendez, Larry Meyer, and Fred Schovanez, and Don Ficken. DarkSky Missouri was supported by volunteers from the Great Rivers Master Naturalist Chapter: Connie Break, Bob Ochs, Jake Ronecker, Mary Klauke, Gary Wester, and Don Ficken.

Activities of both booths included: Hands-on activities: how to use telescopes and binoculars available for checkout from a library like a book. Viewing of the Sun using multiple techniques: 1) SunSpotter telescope, 2) refractor telescope with a solar filter, and 3) Coronado telescope with Ha filter. Activities to learn about meteorites including 1) weigh and measure meteorites (NASA labeled box) and 2) search for meteorites (sand box). Displays illustrating various color temperatures and brightness of light bulbs (two different activities). Displays showing various light measurement devices (Sky Quality Meter, Lux meter, etc.) Laptop video of radar images from Birdcast showing bird migration in the USA during May 2024 (400 million birds). Laptop displaying DarkSky Missouri's website. Coloring activities (NASA solar ambassador). Various handouts offering discussion opportunities.

Star Parties and NSN Astro Kits *by* Bill Biermann

Everyone realizes that the best part of a star party is the WOW factor that comes from viewing objects through a telescope. We had this intention when we scheduled 2 Star Parties in late January at Parkway HS and St. Josephs of Imperial. Naturally, the weather did not cooperate, and we could not get to go outside. So now what? Plan B of course !. We hosted indoor educational sessions. And astronomy kits came to the rescue!

SLAS possesses several hand-on kits that were developed and distributed by the Night Sky Network. Each of the kits have a different theme and contain hands on activities and presentations. The target audience for most of the content is 12-18 years old, and most content is best presented in a classroom environment with audio visual equipment. For both star parties mentioned above, we had a much younger age group, and our venue was a Gym, so using the kits would be somewhat challenging.

Adapt the Kits

Since we did not have the ideal venue or audience for the kits, we ended up adapting the kits for a younger audience, and we also added events that were outside of the kits, and eveloped a few games with space themes outside of the kits.

The first star party was held at St Joe's (Imperial). We added hands on activities, such as making constellations with marshmallows and toothpicks. We also used our NSN kit called "Meteorite or Meteor wrong."

The Meteorite and Meteor Wrong kit is a fun, group-based activity. The presenter gives clues about imposter rocks on earth, and the kids get to interact as a group, separating the imposters from the real Meteorites. Participants get to hold an actual asteroid.in their hand! Being short of volunteers, my daughter volunteered for this star party.

The second star party, held at Parkway High School, had an estimated 500 attend the event (with 210 passing through our booth). We developed a game called "Planet Ping Pong." The kids first made paddles (paper plates painted or colored with planet themes and popsicle sticks attached to the plates for handles. The Ping Pong ball was a balloon that was colored to resemble their favorite planet. Then two opponents would use the paddle to hit the balloon back and forth. It was a big "HIT" as evidenced below.

With our SLAS labor shortage, we also recruited student volunteers, who were extremely helpful in staffing our activities (below).

We also adapted the NSN planetary science kit, and we made scale models of the Sun and planets (9 planets lol). We handed out the nine planets, and had the kids confer with each other, and they had to decide what order the planets belonged in.

SLAS volunteer Kunai Kotar demonstrates the scale and order of the Solar System.

We also discussed planetary scale and sizing of planets. We used an interactive approach. We had the kids huddle amongst themselves and decide (via committee) upon planet order. We also demonstrated how far the outer planets really are via scale.

We also had the opportunity to engage the parents about the upcoming eclipse and handed out eclipse glasses.

Awards Recognition and One Good Thing!
by Bill Biermann

Our membership does an amazing job of bringing astronomy to the public. We also do many other things that are outside of outreach. We want you to share all of those good things about fellow members with us! This will help out with our Membership Recognition Awards.

The club has 5 different recognition awards and we would like our general membership to nominate individuals for the awards. However, getting nominations from our general membership has been tough at times. We have identified one of the issues: You as a member may see one or two good things about a fellow member, but not see Everything that person does. So we have developed a mechanism to help with this issue called "One Good Thing" . The idea is simple. If you experience a good "deed" or a noteworthy experience with a fellow member, simply drop us a note at our "One Good thing" email at

recognition@slasonline.org

Lets suppose 5 different individuals send in their separate lists. An Awards Committee member will assemble those emails, and determine if sufficient activity exists to nominate an individual.

There is not sufficient space to discuss each of the recognition awards in detail, but you can visit the SlASonline website. Go to the Member tab, and then click on the Awards tab for details on each of the awards. We also would like to have more "nominations from the Floor." You as a member can nominate an individual, but you will need to do the legwork on the nomination form. If you don't have the time to nominate, but wish to participate in "One Good Thing", then simply send in your experience to the email address mentioned above.

For Sale: Price cut in half!
Now $400

17.5 inch Dobsonian Telescope

Coulter mirror (around 1996?) F4.5 ?
no viewfinder
K 25mm eyepiece
"tube" 22.25inch x 22.25inch x 76.5inch wood frame plus 1/8 inch panel
base 27.25inch x 27.25inch x 32inch 3/4 inch plywood
height when assembled 84.5 inches

Steve in Clayton, Missouri (314) 591-7349

St. Louis Astronomical Society
Executive Board Meeting Minutes 5/2/2024

1. Opening Activities: a. Attendance: Jim Small, Larry Campbell, Bill Winningham, Brent Buch, Mark Jones, Brad Waller, Don Ficken, Annabell Quast b. Open Meeting: opened at 7:15pm c. Approval of last month's minutes. Moton by Larry C. to approve April meeting minutes second by Brad. Minutes approved. d. Next Board meeting date (on approval of board): 6/6, 7/11, 8/1, 9/5, 10/3, 11/7, 12/5 Meetings will be via Zoom until further notice:

Standing Action: SLSC Report by Will Snyder Action: Get LTP brochures to SLSC. Dennis to contact Don Ficken about getting LTP brochures or business cards. Report: Don is reworking the LTP brochure. Brad will bring SLAS quartercard to SLSC for FF. Report: Brad gave quartercards to Mark at Francis Park on 4/17. Action should be closed. First Friday –None in May, June 7. Events for July-Dec still being finalized Solar Sunday –restart 6/2, 6/9, 6/16, 6/23, 6/30, 7/7, 7/14, 7,21, 7/28, 8/4, 8/11, 8/18, 8/25, 9/1 Note: Will Snyder added 5/26 solar event, we need to add to NSN calendar

2. Upcoming General Membership meeting topics: a. Speaker: Gautham Narayan, PhD*, Univ of Illinois b. Schedule room at Wash U.? Airconditioning maintenance is scheduled for room 162 in McDonnell Hall. Jim has booked room 362 upstairs and also room 214 in Wilson Hall. Note from Rich H- WU's graduation day is Monday, May 13. By Monday, mid-afternoon, the campus will probably be deserted. Most of the students will be gone for the summer, along with many of the non-science faculty. Protestors will have very little to disrupt, and so will have a miniscule audience. Board has decided to keep the meeting in-person and virtual and that Room 362 in McDonnell Hall will be primary room. If rm 162 becomes available we will meet there. Action: Jim, bring portable speaker for meeting Action: Jim to print signs for meeting room 362 location c. Who is recording meeting? Brent d. Special Awards needed Handout leftover Anniv and Outreach certificates

e. Speaker Press Release and social media: f. Special Business – Final nominations and election of officers. Current nominees President – Jim Small, Vice President – Brad Waller, Treasurer – Bill Winningham, Secretary- Mark Jones, Hospitality- Dennis Latinette, BMAL27- Brent Buch, BMAL26- Larry Campbell g. Announce MSRAL registration and AOY nominations A101 – Bill Biermann Special Award announcement Action: Mark, create slide of candidates f. Hospitality: a. Budget – 2024 Budget $360, balance $308 Action: Brad will submit invoice for April meeting expenses Action: Larry will bring diet soda, Brad will bring cookies for May

3. SLAS Financial Report a. Balance Sheet: Balance sheet: $13K checking $13K savings. Total Assets $86.898. YTD $264 in interest on CDs b. Profit/Loss report: Net Income $933 compared to -$1525 for YTD c. Annual Budget meetings: start in September

d. State Corporate filings: 2024 Budget: $20, paid in even years only, not due until August 2024. Federal Form 990 due May 15th
e. Insurance; 2024 Budget $1165, due May 1st. Bill paid insurance premium online and has new policy statement f. Astro League Dues: 2024 Budget: $1070, AL sends invoice around July
Astronomy magazine renewal form throwing error. Astronomy magazine has no phone numbers are posted. Current link has error where it won't process subscription renewal. Probably due to NSN discount as part of renewal is broken.
Action: Bill to check to see if NSN link is working.
4. Speaker Committee If you are working on a Presenter, please keep Brad informed. Budget – 2024 Budget $600, Balance $69
We will go over budget this year because offering visiting speakers hotel. Brad estimates $300 needed for May speaker and $100 for shipping for remaining this year. Board approved extra expenses. Update - Brad estimates May speaker expenses for hotel is $240+40 gas.b. Upcoming speakers:

SLAS Monthly Meeting Presentations 2024

Month	Name	Topic	Sponsor
17-May-2024	Gautham Narayan, PhD	4 Meter Telescope in Chile	Univ of Illinois
21-Jun-2024	Steven R Gullberg, PhD	Archeoastronomy	Univ of OK
19-Jul-2024	Ashley G Davies PhD	Juno, Close Flybys of Io	JPL
16-Aug-2024	Bradley Tsalyuk	Space Shuttle Endeavour Exhibit	CA Science Center
21-Sep-2024	Joseph Marcus, MD	Who Discovered the Expanding Universe? Spoiler: Not Hubble!	SLAS
18-Oct-2024	Pamela Gay, PhD	Super-Secret Squirrel Stuff	Area 42
15-Nov-2024	Robert Zubrin	The Case for Mars	The Mars Society
20-Dec-2024	Robert Reeves	Postcards from the Moon	Perspective Observatory
17-Jan-2025	Bhupal Dev, PhD	Finding New Physics in Debris from Colliding Neutron Stars	Wash U
21-Feb-2025	K Michael Malolepszy	Probing the Sub-Microwave Universe Part III	SLAS
21-Mar-2025	Tom Rathjen	What's Happening in Human Space Flight	NASA

*Possible Live Speaker (Speaker budget may be used to pay for hotel room for speaker) d. Topics of interest - Mark sent Brad email to possible speakers from UMSL, U of Illinois and U of MO Columbia e. Stipends f. Travel
5. Membership Initiatives a. Budget – 2024 Budget $600, Balance $450 Welcome Aboard Meetings – These have been replaced the following standing action. Standing Action: Mark Jones will send out member orientation materials when member joins. Also, schedule monthly member chat meetings are held via Zoom on the Thursday after the general meeting. Action: Mark to convert new member questionnaire from Word doc to Google survey.c. Raffles – not planned d. Attendance prizes – In-person and virtual members will be eligible for attendance prizes in 2024, next prizes in June Action: Engaging younger people with SLAS. Try live-stream from JCO via Twitch. Jim to perform dry-run of live stream and Brent. Link to how-to Twitch https://riverside.fm/blog/how-to-stream-on-twitch; https://twitchtracker.com/channels/live. Update: Ms Sophia Edgell, undergraduate at Brown University has agreed to help SLAS with curating our Twitter and Instagram accounts and create a new TikTok accounts. These media outlets are popular with younger adults and kids.
6. Membership Recognition a. Total Budget 2024 Budget $500, Balance $456 b. NSN Outreach Awards: Awards made in Feb each year, 2023 pins are still in store room c. Membership Report: the April 2024 membership report showing 230 members. We have ten fewer members than last year at this time but gained 13 members over last month due to a combination of more new members and an improvement in renewals. We have noticeably gained in family memberships this year which also helps our member count as we count family members as two members. d. Member anniversary – Next event is November meeting, 2023 pins are still in store room e. Special Award program - 1. Special Award Committee report: Chairman: Bill Biermann. Members: Larry Campbell, Jim Small, Mark Jones, Sharon Bertram, Fred Schovanez, Bill Neubert, Grant Martin, Bill Bierman, Rich Heuermann, Joe Marcus 2. Special Award deadlines: Current Nomination deadline is Sept 1st 3. Nomination reviews: by October 1st 4. Award selection: selections made in November 5. Awards presented at December meeting –
7. Outreach - a. Budget – 2024 Budget $500, Balance $250 (2 tablecloths and banner) b. Member Training Program Status:
c. Purchase of T-shirts for volunteers completed training per budget: Action; Mark need T-shirt design. Mary and Joe Barteau volunteered to come up with T-shirt designs. Slideshow of examples sent to Board on 10-31-23. Action remains open until final design selected. Board preferred Safety Green in style #3 is preferred by Board Do they have t-shirt in a Tall/long? d. Purchase signs for outreach per budget: e. Upcoming outreach events: As of May 1st we have 57 events scheduled for rest of 2024
Gateway Arch - May 11, 2024 (Saturday), June 14, 2024 (Friday), July 12, 2024 (Friday), August 10, 2024 (Friday), September 13, 2024 (Friday), Oct 18, 2024 (Friday) Francis Park – Dates for 2024: May 15, June 12, July 10, August 7, September 11, October 9 Tower Grove Park –May 18, June 15, July 13, Aug 10, Sep 14, Oct 12 DobsonFest – Sep 14 hosted by Riverbend Astronomy Club First Friday – None in May, June 7. Events for July-Dec still being finalized Solar Sunday –restart 5/26, 6/2, 6/9, 6/16, 6/23, 6/30, 7/7, 7/14, 7,21, 7/28, 8/4, 8/11, 8/18, 8/25, 9/1
Note – Planetarium parking lot should be open for all events after Mar 10th. Action: Randy to add Dobsonfest including details for location and times to NSN calendar and solicit volunteers f. Awards/recognitions – g. NSN Outreach hours: Total Hours Reported in NSN: 334.4 hours as of May 1, 2024
8. Old Business:
A. Discuss issues with volunteers for star parties. Perhaps appoint a coordinator whose main job is to insure we have adequate number of members in the volunteer pool for events. Discuss methods to encourage members to volunteer for star parties. Try to find out why people aren't volunteering. Come up with an action for this issue. Coordinator Meeting Report: We increased the number of NSN coordinators from 12 to 20, and we held a meeting (1/31/24) to discuss how to get more volunteers. Decision was made to create a call list and call each member an ask them if they wish volunteer. Timeline: final Script by 2-11-24; final Email by 2-14-24; final Call list by 2-23-24; calls made: starting 2-23-24 end call by 3-10-24. Action: Mark to send call list to the NSN coordinators
B. Scholarships from SLAS- Questions: How to fund via interest earned, How do we select candidates, do we need a committee, are there tax impacts for this, How do we define qualifications? Will we need to send 1099 form? Action: Brad to set up meeting to discuss how scholarship could be funded and executed. Brad will talk to his tax adviser but not until May Board Meeting. Discussion happened at May Board meeting (see note below) and this action can be closed. Discussion: Idea to start setting aside a $20K fund, possibly in US Treasury Bills or CDs. Briefig by Ken Hirsch, Hirsch Accounting and Tax Services. A safe way is to invest in short term US Treasury Bills. With current rates above 5% return, $20K would produce about $1000 per year to use as scholarship. Short term Bills typically less than one year in duration. Short term Bills are paying better than long-term Treasury Bonds. SLAS would need to set up an account to purchase Bills, US Treasury direct. There are zero fees. Action: Bill W to review US Treasury Direct and see what impact this would have on workload for SLAS Treasurer. Is this effort worth using US Bill vs staying with CDs through bank. Also, where this money come from out of current SLAS assets. How would SLAS set up account in SLAS name with SLAS Treasurer as contact?
9. New Business MSRAL Amateur of the Year Nominations requested by Jon Larsen, 2024 AOY Selection Committee Chair, pres@omahaastro.com Info needed includes: Club Affiliation; Title: (if applicable); Submitter's Name; Submitter's Contact Email; Submit-

(Continued from page 7)

ter's Title: (if applicable) Action: Jim to post info on SLASDialogs and/or NSN.

10. Other Committee Reports: If needed

A. SLSC Business: Planetarium parking lot and entrance is now open a. First Friday actions – see above b. Other immediate business

B. SLCL Business a. Annual contract – No contract yet for 2024. b. Upcoming events – tentative dates This summer, SLCL would like to host two virtual programs, one in June and the other in July—they will reach out to Rich Heuermann about those. Then, we are interested in a Star Party for Monday, September 16, 7:00 p.m. Tuesday, September 17, 7:00 p.m. Wednesday, October 16, 6:30 p.m. Thursday, October 17, 6:30 p.m. Wednesday, November 13, 6:30 p.m. Thursday, November 14, 6:30 p.m.

C. Jefferson College Business: a. Committee Meeting report: John Duchek is now a trained observatory operator and has a set of keys. John plans to check and collimate the 16". Ty Frauenhelder is working on training now and was operated the telescope at April open house. John reports collimation screw are stuck and he could not collimatePossible new Eagle Scout projects

1. Mount weather station
2. Build roll-off building for solar scopes
3. Mount other science equipment (meteor cameras, night sky meter) b. Upcoming Outreach Event: JCO –May 18, Jun 15, Jul 20, Aug 17, Sept 14, Oct 10, Nov 16

D. Library Telescope Committee a. Budget – 2024 Budget none requested, expenses will be covered by escrow balance of $2460 b. Upcoming builds or maintenance events – c. Maintenance budget – none requested d. Mileage re-imbursement – see above e. Promotional materials - none requested

E. SLAS Social Events a. Budget – 2024 Budget $390, Balance $ 254 b. Homemade Fest - 2024 Budget $150. Balance $13.81 c. Star-B-Q – 2024 Budget, $240, Balance $ 240 Report: Star-B-Q 2024 has been scheduled for August 3, 2024 at Stacy Park in Olivette. Event has been added to NSN calendar

Other

F. SLAS Brochures a. Budget 2024 $600, Balance $448 b. Quarter cards – YTD 1000 cards printed.

G. Loaner scope Program a. Budget – 2024 Budget $100, Balance $88 Report: Jeff Carpentier has volunteered to help restore the 1975 model C8 telescope. Bob Klein has also volunteered to help. b. New donations: SLAS has received a very generous donation of two solar telescopes from the estate of Michael D. Tuffli. These solar telescopes will be used by SLAS for solar observation and public education. We received a Coronado SolarMax 90 and a smaller one, MaxScope 40, no mountings for the scopes. Current sales price for new telescopes would be $5500 for the 90mm telescope and $1650 for the 40mm telescope. Report: Mark J. has purchased a 4" dovetail plate (cost $45.75) to mount to the 90mm SolarMax Scope. It has been received and installed. The 90mm scope can now be mounted to any mount having a Vixen dovetail.

c. Replacement Parts for the LTPs - d. Items for sale several:

H. SLAS Library a. Budget – 2024 Budget $200, balance $200

Other – 2024 TSE. a. FAQ was added to SLAS website. SLAS has location selected to observe the eclipse. Location is parking lot of Marcus Cape West Cinema, Cape Girardeau, MO

Report: We had more then 20 SLAS members join us at the Marcus West Cape Cinema parking lot on April 8th. The site is located on west side of I-55 in Cape Girardeau, MO. In total, we had around a 100 people at the site. b. SLAS purchased 10,676 eclipse glasses in 2023. As of April 1st we have 1300 glasses left. We sold $1605 worth of glasses. Our original cost was $3150.

Report: In May 2022, the SLAS general membership approved a motion to purchase 10,000 eclipse glasses for the 2023 and 2024 eclipses. The purpose was to provide glasses for purchase by members and other organizations; to handout glasses at SLAS outreach events; and to donate glasses to schools and other organizations, particularly in under-served communities. Since SLAS has benefited from many donations and fund-raising efforts over the last 10 years, SLAS is in a good financial position to buy the glasses without a need to make money or break even on sales. Our goal was to serve our community. Now that the eclipses are over, a final tally of the glasses has been made. SLAS sold 3,515 glasses and donated 6.960 glasses. SLAS took in $1605 in sales on the cost of $3150 for a net loss of $1,545. Thank you to all members who generously bought glasses to help defray our expenses. As a final donation, 1100 glasses were delivered to Warby Parker, on April 17th as part of the Astronomers without Borders program. These glasses will probably be sent off to distant lands for people we will never meet to use. See links below. https://www.warbyparker.com/help?a=What-can-I-do-with-my-solar-eclipse-glasses-after-the-eclipse-is-over---id--klau-nOzS22hykB-tBJplw https://astronomerswithoutborders.org/programs/solar-glasses-distribution

c.SLAS has 11 Sunspotter Telescopes to loan to schools and other organizations for the TSE. 4 Sunspotters have been loaned to Rockwood School District until after the eclipse. 1 Sunspotter loaned to Rich Fefferman for Arch events. 1 Sunspotter loaned to Bill Breeden for Francis Park events. 1 Sunspotter loaned to Perryville. 1 Sunspotter loaner to Luthern Hight School

Report: SLAS is currently tracking 11 Sunspotter telescopes that have been distributed for the eclipse. These are tracked by an inventory number. The Sunspotters currently at Rockwood are #43-1439598-038, 039, 040, 041. Yes I agree, since Rockwood has specific plans for the 4 Sunspotter scopes, the scopes should remain in possession of Rockwood. SD. If Rockwood would SLAS to transfer ownership of these 4 Sunspotters, I would certainly support that request for SLAS Board approval. It would be my desire for Rockwood to share any specific plans with us, so we might pass this information on to other users. Any sort of curriculum or materials could be used to enhance the use of these scopes. Don Ficken is coordinating the return of the other SunSpotters to SLAS. Mark Jones has volunteered to take over administration of the scope after Don has possession. Motion: I request the Board agree to loan 4 Sunspotter scopes to Rockwood School District for their education programs. Second Brad. Motion approved. d. Four SLAS members make up DEB Initiative Team 019. Maryanne Angliongto; Mark Bremer; Ashvik Chilakala; Buz (Carl) McCullough. We will be imaging the eclipse at Sam A. Baker KOA campgrouind at Paterson, MO. The manager of the campground gave us a site with power; water; restrooms and A/C in exchange for Maryanne hosting a Star Party and the team doing outreach on eclipse day. Report: If you go to "debra.physics.siu.edu" and click on "Change View to First Contact Order", you can see images from the DEB Init. teams along the path. The labels TSE and PSE indicate if the site was in the path or outside the path. Then if you look at the images labeled "Last HDR Image" you will see an image during totality. As you progress through the images you will be able to see the change in activity on the limb of the Sun over the duration of the eclipse. Not much available yet, we uploaded our Totality images as soon as we could after the eclipse. Not sure why some of the others have not been populated yet. Our images are at "TSE Site: Patterson, MO Lead: Angliongto ID: 019DEB"

l. Merchandise Budget – 2024 Budget $100, balance $100 36 of the new coffee mug design are ready for sale to members. $10 each or two for $15

J. Telescope Making

K. Newsletter a. Budget 2024 $600, Balance $282 (postage+toner)

L. Website - a. Budget 2024 $750, Balance $406

M. Social 76 members of Private FB page 3187 followers on Public FB

N. Night Sky Network

O. SLASdialogs (part of Website Budget) SLAS Groups.io – 140 members Annual $110 account fee is due in January each year 3.2GB of 30GB is being used

P. Dark Site – Special Use Permits have been received for Danville and Whiteside for 2024 are stored in the groups.io folder linked https://groups.io/g/SLASDialogs/files/Permits.

Q. Observing Programs

R. Star Parties Donation:

11. Closing Activities: Motion to adjourn by Brad second by Brent meeting adjourned at 10:02pm

St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
January through May 2024

	Jan - May 24	Budget	$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	520.00	250.00	270.00
Magazine Subscription	1,696.50	1,192.40	504.10
Membership Dues	2,560.00	2,105.00	455.00
Total Income	4,776.50	3,547.40	1,229.10
Cost of Goods Sold			
Magazine Subscriptions	1,121.69	1,192.40	(70.71)
Total COGS	1,121.69	1,192.40	(70.71)
Gross Profit	3,654.81	2,355.00	1,299.81
Expense			
1-Programs & Events	1,389.65	1,650.00	(260.35)
2-Newsletter	419.46	250.00	169.46
3-Library expense		50.00	(50.00)
5-Loaner Scopes	11.84	50.00	(38.16)
6-Brochures	298.60	250.00	48.60
7-Insurance	1,163.09	1,165.00	(1.91)
8-Website	343.47	400.00	(56.53)
9-Administrative Expenses	1,449.82	1,594.50	(144.68)
Jefferson College Observat...	125.95		125.95
Total Expense	5,201.88	5,409.50	(207.62)
Net Ordinary Income	(1,547.07)	(3,054.50)	1,507.43
Other Income/Expense			
Other Income			
Donations	690.00		690.00
Interest Income	551.23	20.00	531.23
LTP Receipts	30.00		30.00
Total Other Income	1,271.23	20.00	1,251.23
Other Expense			
LTP Disbursements	158.20		158.20
Total Other Expense	158.20		158.20
Net Other Income	1,113.03	20.00	1,093.03
Net Income	(434.04)	(3,034.50)	2,600.46

St. Louis Astronomical Society
Balance Sheet
As of May 31, 2024

	Dec 31, 23	May 31, 24
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	12,072.69	12,126.20
Deposit, Certificate of	16,000.89	46,551.34
Library Telescope Escrow	1,964.87	1,836.67
PayPal	152.96	737.54
Savings - First Bank	43,138.18	13,138.96
SLAS Eclipse Conference Escr...	2,580.32	2,580.32
Total Checking/Savings	75,909.91	76,971.03
Other Current Assets		
Inventory Asset	841.87	781.21
Undeposited Funds	75.00	25.00
Total Other Current Assets	916.87	806.21
Total Current Assets	76,826.78	77,777.24
Fixed Assets		
Accum Depr - Office Equp	(216.65)	(216.65)
JC Scope and Observatory	9,137.44	7,752.94
Office Equipment	216.65	216.65
Total Fixed Assets	9,137.44	7,752.94
TOTAL ASSETS	85,964.22	85,530.18
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	81,754.13	77,466.56
Net Income	(4,287.57)	(434.04)
Total Equity	85,964.22	85,530.18
TOTAL LIABILITIES & EQUITY	85,964.22	85,530.18

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 an editable document or images to newsletter@slasonline.org
Please provide captions if sending images.

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 All meetings are on First Thursdays unless noted. ***Note: Board meetings will be via Zoom until further notice.*** Dates 7/11, 8/1, 9/5, 10/3, 11/7, 12/5

SLAS Dark Sky Observing Dates All dates on Saturdays 7/6, 8/3, 8/31, 9/28, 10/5, 10/26, 11/2, 11/30, 12/28

Francis Park Events: These events are on Wednesdays of the week nearest the first quarter Moon 7/10. 8/7, 9/11, 10/9

Aim for the Stars Public events held on 3rd Saturdays at the Jefferson College Observatory and Patio. 7/20, 8/17, 9/21, 10/19, 11/16, 12/21

Stargazing at the Arch Events for the public held at the Gateway Arch 7/12, 18/10, 9/13, 10/18

Sky Orienteering Events For members who want to gather and do some relaxed observing at Babler State Park (BSP) or at the Jefferson College Observatory (JCO) 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

Dobsonfest - Sept 14 hosted by Riverbend

Pattonville Observatory Public Viewing Dates See you in August, 2024

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.

SLAS Events

	June
21 Fri	SLAS Regular Meeting
22 Sat	STEAM Academy-McCluer South Berkeley
22 Sat	Backyard Campout in Des Peres Park
23 Sun	SLSC Solar Sunday PTV
27 Thur	SLAS New Member Zoom
	July
6 Sat	SLAS Dark Sky at Danville
7 Sun	SLSC Solar Sunday
10 Wed	Francis Park
11 Thur	SLAS Board Meeting
12 Fri	Stargazing at the Arch
13 Sat	Tower Grove Stargazing
14 Sun	SLSC Solar Sunday
16-18	Camp Cedarledge Star Party
19 Fri	SLAS Regular Meeting
20 Sat	Aim for the Stars at JCO
21 Sun	SLSC Solar Sunday
25 Thur	SLAS New Member Zoom
28 Sun	SLSC Solar Sunday
30 Tue	Camp Emeth Late Night
	August
1 Thur	SLAS Board Meeting
2 Fri	First Friday PTV SLSC
3 Sat	SLAS Star-B-Q Stacy Park
3 Sat	SLAS Dark Skies Stacy Park
4 Sun	SLSC Solar Sunday
7 Wed	Francis Park
10 Sat	Stargazing at the Gateway Arch
10 Sat	Tower Grove Park
11 Sun	SLSC Solar Sunday
12 Mon	Library Telescope Maintenance Day
13 Tue	Kids Time Jefferson County Library-Arnold
16 Fri	SLAS Regular Meeting
17 Sat	Aim For the Stars JCO
18 Sun	SLSC Solar Sunday
22 Thur	SLAS New Member Zoom
23 Fri	SLCL After Hours Family Campout
25 Sun	SLSC Solar Sunday
31 Sat	SLAS Dark Sky Observing at Danville
	September
1 Sun	SLSC Solar Sunday
5 Thur	SLAS Board Meeting
6 Fri	SLSC First Friday
10 Tue	Lewis and Clark Library
11 Wed	Jamestown Bluffs Library
11 Wed	Francis Park
12 Thur	Stacy Park
13 Fri	Stargazing at the Gateway Arch
13 Fri	Crestwood Park
14 Sat	Dobsonfest
14 Sat	Tower Grove

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 @ $45.75 / 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

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president at slasonline.org

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

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secretary at slasonline.org

Treasurer ***Bill Winningham, (Don Ficken - membership)***
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Hospitality ***Dennis Latinette*** 636-244-2867
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board25 at slasonline.org

Larry Campbell 314-713-9258
Board26 at slasonline.org

Brent Buch 314-239-0329
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ALCOR ***Bill Winningham*** 636-357-2763
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Webmaster ***Jim Small*** 314-909-7211
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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
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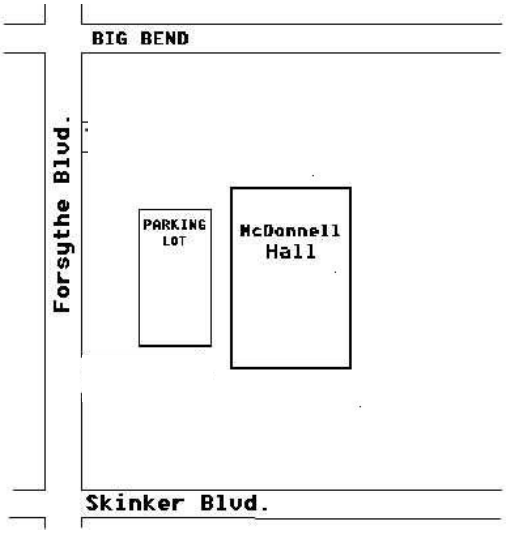
Who We Are and What We Do

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 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
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