THE EVENT HORIZON

ST. LOUIS ASTRONOMICAL SOCIETY
Devoted to the Interest and Advancement of the Science of Astronomy

VOLUME 32, Issue 2
February, 2022

First Images of a Supermassive Black Hole

by

Kazu Akiyama
MIT Haystack Radio Observatory

Dr. Kazu Akiyama of MIT's Haystack Radio Observatory at Westford, Massachusetts will be featured at the February meeting of the Saint Louis Astronomical Society. The meeting will be held via Zoom online conference only. The meeting and lecture will begin at 7:30 p.m. on Friday, February 18. Zoom access information is below.

In April 2019 the first images of a black hole were released by the Event Horizon Telescope (EHT) global consortium. The first image showed a bright ring of energy enclosing the shadow of the supermassive black hole Messier 87* (M87*). The black hole is lurking at the center of M87, a huge galaxy located 53 million light years away. New images from the EHT map polarized radio waves that trace out the structure of the black hole's very strong magnetic field. The EHT is a global network of large radio telescopes. Its "images" are produced by combining the radio wave observations of the individual telescopes. EHT can see a level of detail equivalent to a single telescope as wide as the Earth. Dr. Akiyama will present an overview of the EHT. He will talk about major breakthroughs that made these images possible and what these images have revealed about the nature of supermassive black holes.

Dr. Kazu Akiyama is a research scientist at Massachusetts Institute of Technology (MIT) Haystack Observatory in Massachusetts. His primary research interest involves the extreme environment in the vicinity of black holes. He uses radio telescope observations that employ the technique of very long baseline interferometry. He joined the team of the Event Horizon Telescope (EHT) in 2010, and has led the Imaging Working Group of the EHT Collaboration since its establishment in 2017.

Upcoming Meetings 2022
March - Michael Lockwood -
April - Open
May - Open
June - Open
July - Open

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

SLAS Homemade Fest will be held on Saturday April 23rd at the Kirkwood Community Center! Mark your calendar!

Inside This Issue

President's Corner MSRAL 2022 Call for Volunteers	2
Unitron for Sale	3
NSN Outreach	4
Francis Park	5
Glen Greenway	6
EMDSO events	7
Board Minutes	8
Financials	9
Events	10
Contacts	11

President's Corner
by
Jim Small

Greetings! It's been WAY too long… Sincere apologies on failing to get the newsletter out in a timely manner. We'll see if I can fix that going forward. I will still compile a December and January issue as I have some specific ideas for them since their time is already past.

Congratulations to those members (24) who qualified for the Night Sky Network outreach awards! We will be getting your certificate and pin to you in the next week or two!

The Jon Lomberg prints you may have won in our attendance prizes or purchased have arrived! Contact Jim Small to arrange to pick them up!

In this issue you will find TONS of dates for SLAS events and regular star parties. I have also included events for other clubs, in particular EMDSO which is holding events both at East Central College and Big Blue Observatory at Cedar Creek. If you haven't visited their facility, it's worth the trip! The events page would probably make a decent refrigerator page for keeping track of upcoming events.

As we are back to in-person events, just let me caution you to wear a mask and sanitize your hands and telescope afterwards. I made the mistake of NOT doing that in November at the observatory and did manage to get COVID 19. Fortunately, monoclonal antibodies and a double vaccination prevented anything more than bad cold symptoms. Mask Up!

The MSRAL committee is in full force and is meeting regularly on Wednesdays via Zoom. We will need a bunch of volunteers to help out with the conference, so feel free to get involved! I'm looking forward to meeting with the region since we haven't had an in-person meeting for a couple of years. The event will be held on the campus of Wash U and the JC Observatory. Registration should go live somewhere close to March 1. We will send a link at that time.

We have booked the large room of the Kirkwood Community Center for April 23rd for Homemade Fest this year. Be sure to come with your favorite gadget, idea, or whatever peaks your interest that you think we might be interested in!

We have been getting a number of telescopes donated (I think people have been cleaning house during the pandemic!) Because of the number, we will likely have scopes for sale soon. The January back issue might hold ads for some of those.

It's exciting to get back to a somewhat normal situation and to be meeting with the public at Star Parties once again. Hope to see you soon! ...Jim Small

From the MSRAL 2022 Committee: Call for Volunteers

The St. Louis Astronomical Society in conjunction with Washington University and Jefferson College, will host the 2022 Mid-States Region of the Astronomical League (MSRAL) convention in St. Louis Missouri. The dates for MSRAL are **June 3-5, 2022**. The Mid-States region includes Missouri, eastern Kansas, eastern Nebraska, northern Arkansas and eastern Oklahoma. We expect many of our fellow amateur astronomers, from other mid-states clubs, to attend.

The MSRAL convention will run from Friday night through Sunday morning. The traditional Friday Star-B-Q will be held at our Jefferson College Observatory site, which opened in September 2021. We will have the observatory and SLAS member telescopes for viewing. Saturday and Sunday events will be held on campus of Washington University. Saturday we will have our morning and afternoon paper presentations; and tours of the Earth and Planetary Sciences Center at Washington University. Saturday night will feature our annual MSRAL banquet, Amateur of the Year presentation, and keynote speaker at Washington University's Knight Center. MSRAL will conclude Sunday morning with final paper presentations.

SLAS has hosted this convention in the past. Once again, Jim Small has volunteered to be convention chairperson and Cook Feldman has volunteered to be the convention Treasurer. To put on a successful convention, we establish volunteer sub-committees for all major functions. We are now soliciting you, to volunteer for positions on the five committees below. Please send your questions and your desire to volunteer to: "msral2022com@slasonline.org"

1. Registration Committee. (Chairname: TBD).
Responsible for:
Creating registration packets for each attendee including: name badges, lanyards and holders, meal tickets, door prize tickets, envelop stuffing, programs printing, maps to meeting rooms and campus
Setting up and manning registration tables on Friday afternoon and Saturday morning
Receipt of any "day of" registrations, maintaining cash box and turning receipts over to Treasurer, posting of all signs for MSRAL, including parking, updating Registration/ Meals Official List, E&PSC Tour sign-up sheets

2. Speakers Committee. (Chairname: TBD). (TBD).
Responsible for:
Recruitment of speakers
Draft of speaker abstracts and Bios
Draft of Program
Organize MSRAL Group photo
Provide speakers with AV equipment, water, etc
Extra room for Amateur of the Year (AOY) election dur-

(Continued on page 3)

(Continued from page 2)

ing lunch to program

3. Vendors Exhibits and Door Prize Committee. (Chairname: TBD). (TBD). Responsible for:
Solicit vendors for exhibiting their products
Solicit vendors for donations for door prizes
Develop list for all door prizes and vendor logos for program
Schedule for when to do drawings during Program
Conduct door prize drawings
Make sure each registrant has ticket

4. Hospitality, Food and Catering Committee. (Chairname: TBD). Responsible for:
Friday Star-B-Q at Jefferson College
Select caterer, establish menu, coordinate with caterer for arrival and set up, cleanup after Saturday/Sunday Morning Refreshments - Compton Hall
Buy and deliver small plates, napkins, spoons, coffee, bagels, water, juices, etc
Saturday Lunch – E&PS Atrium
WU caterer will be used, establish menu, coordinate with caterer for arrival and set up, cleanup after
Saturday Banquet – Knight Center
WU caterer will be used, establish menu, coordinate with caterer for arrival and set up
One reserved table for special Key Note Speaker and MSRAL Chair. Extra chairs for attendees not seated for banquet
Special Notes
Review all contracts with MSRAL Chair and Treasurer
Establish ordering cutoff date for adding people
Caterer billing instructions, should go to MSRAL 2022 Treasurer

5. PR/Communications Committee. (Chairname: TBD)

Responsible for working with other committees and MSRAL mailing lists to out all announcements such as: call for Papers, call for nominations for AOY, promotion of Astro League Sales, deadlines (including price increases) for registration, meals, housing, banquet, tours, etc
Special mailing to local clubs and monthly updates to registrants

Unitron 114 Telescope for Sale

60MM Objective 900MM focal length Unitron model 114 refractor telescope on a wooden tripod with an altazimuth mount.

The mount has slow motion controls. The telescope is probably 1950's vintage, and has seen some damage and has some missing parts. The telescope has been repaired to working condition, and substitute parts made where needed. The finder scope is missing the eyepiece. Included is the tube assembly, the mount, a focuser extension tube with adapter for .965" eyepieces, wooden box (labeled "114" which looks designed for the tripod head). No eyepieces are included. **$200**

Unitron 220A Camera for sale

This camera was meant for use on Unitron refractors and is a collectible for those interested in old astrophotography equipment. It appears to be in working condition. It comes with the camera body, 3 removable film mounts, and a wooden box for storing it. **$100**

Unitron Unihex eyepiece turret

Mounts in the draw tube for a Unitron refractor and has spots for five .965" and one 1.25" eyepieces. Has extension tube that threads onto the turret and slides into the draw tube. Note: the tube is not 1.25" diameter, so the turret will need a different extension tube or adapter for use with standard 1.25" draw tubes. Does not come with a wooden case. **$125**

Unitron Eyepieces

40MM Monochro 1.25" **$45**	H 25MM .965" **$45**	K 18MM .965" **$45**
K12.5 .965" **$45**	9MM Symacc .965" **$45**	5MM Ortho .965" **$45**

Contact Greg Rigelman at gregrigelman@sbcglobal.net or 636-484-4293

GOT ITEMS FOR SALE? Put an ad in The Event Horizon! Members may run ads for free for three months, non-members for $10. Photos will help. Send info to Jim Small at newsletter @ slasonline.org. The January back issue will have a number of ads. You may also bring items to Homemade fest for a swap meet!

SLAS 2021 Outreach Volunteer Recognition

In 2021 we had 39 SLAS members volunteer for Outreach Events! Night Sky Network offers award Certificates and Pins to recognize individuals who have volunteered and performed public outreach. In 2021, due to COVID-19, NSN updated their requirements to reflect some of the more challenging outreach conditions. Member clubs whose members performed and reported on just (2) or more outreach events in 2021 using the NSN event management system are qualified to receive pins.

2021 we had 24 members (2 or more)
2020 we had 18 members (2 or more)
2019 we had 22 members
2018 we had 21 members
2017 we had 20 members
2016 we had 26 members
2015 we had 26 members
2014 we had 14 members

In 2021, SLAS members volunteered for more than 96 events and logged 593.5 hours for NSN events

75 events and logged 305 hours in 2020
163 events and logged 1477 hours in 2019
138 events and logged 1350 hours in 2018
214 events and logged 1658 hours in 2017
159 events and logged 1620 hours in 2016
102 events and 1430 hours in 2015
72 events and 736 hours in 2014
59 events and 716 hours in 2013

Since June 2007 SLAS members have logged 12,111 hours for NSN events

Thank you to the following members in 2021

Bill Breeden	49	events;	67.5	hours
Donald Ficken	24	events;	62	hours
Mark Jones	21	events;	44.5	hours
Cook Feldman	13	events;	46	hours
James Small	10	events;	25	hours
Chris Hanson*	9	events;	29	hours
Rita Breeden	9	events;	27.5	hours
Randy Harrison*	8	events;	29	hours
Richard Fefferman	8	events;	15.5	hours
William Neubert	7	events;	26	hours
Carl McCullough	7	events;	22.5	hours
Bradley Waller	7	events;	22	hours
John Strebeck	7	events;	15.5	hours
Maryanne Angliongto	6	events;	14	hours
John Beaury	5	events;	17.5	hours
Phyllis Nolan	5	events;	14.5	hours
Ty Frauenfelder*	5	events;	13.5	hours
Rick Menendez	5	events;	12.5	hours
Richard Jennings	4	events;	13.5	hours
Jeff Carpentier	4	events;	9.5	hours
Tom Hale*	4	events;	9.5	hours
Ronald Sides*	3	events;	9	hours
Benjamin Winningham	2	events;	7	hours
William Winningham	2	events;	7	hours
John Duchek	1	event;	5	hours
Ashley Lewis	1	event;	3	hours
Kenneth Levy	1	event;	3	hours
Mark Bremer	1	event;	3	hours
Frank Mack	1	event;	2.5	hours
Carl Masthay	1	event;	2	hours
Murray Fishman	1	event;	2	hours
Jeff Kisslinger	1	event;	2	hours
Brooke Myers	1	event;	2	hours
James Tyrrell	1	event;	2	hours
Scott Devine	1	event;	2	hours
Brian Dowe	1	event;	2	hours
Chris Nobbe	1	event;	1.5	hours
Bill Biermann	1	event;	1	hours
Charles Laughton	1	event;	1	hours

2021 Volunteers, Special Mention

Bill Breeden, Outreach Coordinator, Francis Park, Virtual Coordinator

Don Ficken, Library Coordinator, Virtual Coordinator

Brad Waller, SLSC Coordinator

Richard Fefferman, Gateway Arch Coordinator

***First-time Pin recipients**

- **Chris Hanson***
- **Randy Harrison***
- **Ty Frauenfelder***
- **Tom Hale***
- **Ronald Sides***

SLAS will be awarding NSN pins and certificates to SLAS outreach volunteers with 2 or more events logged in 2021. You can view the pin at the link below

https://nightsky.jpl.nasa.gov/news-display.cfm?

Francis Park Stargazing · 2022 Schedule

Presented by the St. Louis Astronomical Society

~ In Memory of Glennon E. Greenway ~

Enjoy Wednesday night stargazing sessions at Francis Park!

This year, stargazing at Francis Park is presented in memory of **Glennon E. Greenway**. All are welcome to join us! Stop by and look at the Moon or bring your observing gear. This event is scheduled near the First Quarter Moon each month. We provide views of craters, mountains, and shadows on the Lunar surface. Members of the St. Louis Astronomical Society also share telescope views of planets when they are visible. You may even be able to see the moons of Jupiter and Saturn, or a distant double star!

Date	Time	Moon Age	Planets we can Observe
Wednesday, April 6	7:00-9:30PM	5 days (waxing cres.)	Mercury, Uranus.
Wednesday, May 4	7:00-9:30PM	3 days (waxing cres.)	Mercury.
Wednesday, June 8	7:00-9:30PM	9 days (waxing gibb.)	None.
Wednesday, July 6	7:00-9:30PM	7 days (first quarter)	None.
Wednesday, Aug. 3	7:00-9:30PM	6 days (first quarter)	Mercury.
Wednesday, Aug. 31	7:00-9:30PM	5 days (waxing cres.)	Mercury, Saturn.
Wednesday, Sep. 28	7:00-9:30PM	3 days (waxing cres.)	Jupiter, Saturn, Neptune.
Wednesday, Oct. 5	7:00-9:30PM	10 days (waxing gib.)	Jupiter, Saturn, Neptune.

SAFETY COVID PRACTICES

For your safety, we recommend wearing a mask and using hand sanitizer. Practice six feet social distancing while waiting in lines. Attend this event only if you are comfortable with these practices.

LOCATION

We set up in Francis Park in south St. Louis city, at Tamm Ave. & Itaska St.
Events will be canceled for unfavorable weather or sky conditions.
Visit www.slasonline.org, and click Event Calendar for up-to-date information.

In Memory of Glennon E. Greenway
1947-2016

Long time member of the St. Louis Astronomical Society, Glenn could always be found with his telescope set up at many locations around the city. He actively supported the Society's astronomy outreach programs and was always willing to share a view through his portable refractor. He favored observing the Moon and planets, and he had an uncanny ability to find illusive Mercury just after the sun had set. His knowledge of planet orbits and positions on the sky was immense – he often shared annotated sky charts showing the motions of the Moon and planets across the sky. Due to Mercury's frequent appearances this year, it is fitting to dedicate this year's Francis Park Stargazing events to Glenn's memory.

Guy Ottewell's Astronomical Calendar *was an annual favorite publication of Glenn's; he enjoyed explaining the various charts to everyone. These illustrated books ended with the 2016 annual edition – the same year we lost Glenn. Ottewell continues to publish astronomical tables in PDF format each year, so I think Glenn would be pleased.*

Glenn was among the first to join our outreach efforts here. He enjoyed setting up his refractor, as well as binoculars on a tripod, at the north end of our observing area on Tamm Avenue. He would be found aiming his refractor low in the west toward a seemingly empty sky, just after the sun set. Yup, he was looking for Mercury. When observing Mercury through the eyepiece, I think of Glenn.

Glenn thoroughly understood planetary orbits, positions on the sky, celestial mechanics, sizes on the sky (degrees, arcminutes, and arcseconds), and the coordinate system of declination and right ascension. He also could explain the interactions of planetary and lunar bodies, such as eclipses, transits, shadow transits, and occultations. I owe much of my knowledge of these phenomena to Glenn's enthusiastic explanations.
----Bill Breeden

EMDSO Star Party Schedule

EMDSO, Eastern Missouri Dark Sky Observers, an astronomy club in Franklin County, MO is a registered 501 ©(3) organization of amateur astronomers dedicated to the advancement of astronomy in east central Missouri. We develop astronomical resources such as telescopes and observatories, and offer astronomy programs to groups such as families, schools, service organizations, libraries, scouts and churches. We offer astronomical observing events (star parties) for the general public on a regular basis and private observing events to groups by reservation. Please call Rick Schwentker to make a reservations or ask for information ie: cancellations or go to emdso.org to fill out reservation form. All public stargazing events begin at dusk. Events maybe canceled due to clouds or inclement weather. Stargazing events are held outside but come prepared to wear a mask and social distance if the Covid risk still exists. Bring a flashlight, bug spray, your telescope or binoculars, lawn chair and appropriate clothing for cool nights. Handicapped access is provided to the observatory deck. View the wonders of our universe such as planets, stars and nebulas through our 30" Dobsonian telescope at the Big Blue Observatory. Don't miss out on the excitement. Make your reservations today for the year 2022.

2022 Public Stargazing Schedule

(BB) indicates observing at Big Blue Observatory in New Haven and (ECC) indicates observing at East Central College in Union MO. * indicates recommended EMDSO meeting/meal prior to stargazing.

BB Friday	BB Saturday	ECC Saturday
3/4, 3/25	3/26	3/5
4/1, 4/29	4/30	4/2
5/6, 5/27	5/28	5/7
6/3, 6/24	6/25	6/4
7/1, 7/29	7/30	7/2
8/5, 8/26	8/27	8/6
9/2, 9/23	9/24	9/3
9/30, 10/21	10/22	10/1
11/18, 11/25	11/19	No ECC observing

No planned events in December.

Big Blue Obsevatory is located at Cedar Creek Conference Center, 1401 Olive Road, New Haven, MO 63068
cedarcreekcenter.com

Above: A Library Telescope Maintenance Day held at the Oak Bend branch of St. Louis County Library. Members learned what it takes to keep the telescopes going!
Left: Larry Campbell works on a telescope.

Right: Richard Jennings works on a Library Telescope. The telescopes are Orion Starblast 4.5" reflectors.

Below: Randy Harrison adjusting the secondary of a library telescope. This one proved difficult! (Ask him about it!)

St. Louis Astronomical Society
Devoted to the Interest and Advancement of the Science of Astronomy
Executive Board Meeting Minutes 1/6/2022

1. Opening Activitie2 a. Attendance: Bill Winningham, Brent Buch, Mark Jones, Jim Small, Bradley Waller, Larry Campbell
b. Open Meeting – meeting opened at 7:08pm
c. Approval of last month's meeting minutes. Motion by Jim second by Brent. Minutes approved d. Next Board meeting date: Dates for 2022: Jan 6, Feb 3, Mar 3, Apr 7, May 5, Jun 2, Jul 7, Aug 4, Sep 1, Oct 6, Nov 3, Dec 1 Meetings will be via Zoom until further notice:
2. Upcoming General Membership meeting topics:
a. **Speaker**: Stephen Hummel and we have bio information for the press release. Meeting is Jan 21 b. Special Awards needed: Plaques (Individual and perpetual) will be ready by the meeting
c. Speaker Press Release: Information is sent, should be out soon.
d. Special Business needed: Presentation of Special Awards
e. A101: Mark's 2022 events have been linked on SLAS website: https://www.slasonline.org/files/2022_events.pdf
3. SLAS Financial Report a. Balance Sheet. Total assets $85,211 (including observatory) b. Profit/Loss report – thru 12-31-2021 net income $2433, could change slightly on final year-end report c. Annual Budget meetings – start again in September d. Corporate filings:
4. Speaker Committee
a. 2021 Budget - $400 2021 balance $6 b. Upcoming speakers:
SLAS Monthly Meetings Presentations 2021-2022

Month	Name	Topic	Sponsor
21Jan-2022	Stephen Hummel	Preserving the Night Sky	McDonald Obs
18-Feb-2022	Kazumori Akiyama	Event Horizon Telescope	MIT
18-Mar-2022 Open, 15-Apr-2022 Open, 20-May-2022 Open, 17-June-2022 Open, 15-Jul-2022 Open, 19-Aug-2022 Open, 16-Sep-2022 Open, 21-Oct-2022 Open,			
18-Nov-2022	Brett McGuire	TBD	MIT
16-Dec-2022	Open		

d. Topics of interest. James Webb Space Telescope, Katie Bouman
e. Stipends. Jim will send addresses for Scott Roberts and Stephen Humell so Brad can mail mugs
f. Travel
5. Membership Initiatives
a. 2022 Budget - $500 and 2021 Budget - $450. Balance $101
b. Welcome Aboard Meetings c. Raffles
d. Attendance prizes this month. Next prizes are March 2022. Suggestion if we are buying items from Randy for door prizes can we have him hold the items and then direct ship to prize winners. Action: Brad will contact Randy to see if he is willing to direct ship door prizes purchased by SLAS to winners.
6. Membership Recognition
a. 2022 Budget - $550 and 2021 Budget $420, balance $69
b. NSN Outreach Awards: Given out in February
Action: Mark to run final 2021 number and Jim to order the pins.
c. Membership Report: Report from Don Ficken - SLAS ended the year with 245 members representing a 34 member (16%) increase over 2020. Over the last ten years we have grown from 155 members to 245 members which is roughly a 4.7% compounded growth rate. New memberships, particularly family memberships, was the primary driver of the increase. Retention slipped a little but not enough to offset the new memberships. Additionally, I just sent the ALCOR report to the Astro-League.
Action: Bill will update 2022 budget for membership income
d. Member anniversary – All pins and certificates mailed for 2021. No further action until November 2022
e. New Award program - $600 budget (balance $340 carry-over for perpetual plaques
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 4. Nomination reviews: 5. Award selection:
6. Plaques purchased: proofs for the plaques have been sent. Perpetual plaque artwork will be the 2nd design
7. Awards presented: Presentation at the January meeting.
7. Outreach - a. 2022 Budget - $620 and 2021 Budget - $700, balance $676 b. Member Training Program Status: on hold for the time being.
c. Purchase of T-shirts for those volunteers who have completed training. On hold for now Mark presented draft for volunteer badges from Zazzle. These can be personalized with names
d. Purchase of lawn signs:
e. Upcoming outreach events: Bill Breeden has published the 2022 Francis Park schedule. This year, due to the frequent visibility of the planet Mercury from our observing location, Francis Park Stargazing is dedicated to the memory of Glennon E. Greenway. Glenn was a very active member of SLAS, and passed away in 2016. He was an avid supporter of our Francis Park events, and was known for locating Mercury and sharing views of the planet through his refractor. All events are on Wednesdays from 7:00PM until 9:30PM. Dates are: April 6, May 4, June 8, July 6, August 3, August 31, September 28, and October 5
f. Awards/recognitions
g. NSN Outreach hours for 2021 500 hours
8. Old Business: a. Training Program start a committee Action: Mark to send a meeting notice to have the first meeting.
9. New Business: none
10. Other Committee Reports: If needed
MSRAL 2022: Dates will be June 3-5 at Washington University. Facility confirmed. Jeff Gillis-Davis will host with physics dept. Next committee meeting January 19th
A. SLSC Business: a. First Friday actions: There will be no first Friday telescopes for Jan. Possible Feb event Action: Brad will check with Will about 2022 plans b. Other immediate business
B. SLCL Business a. Annual contract – b. Upcoming events -
C. Jefferson College Business:
a. Committee Meeting report:
b. Upcoming Outreach Events: Sunday at the Observatory: January 2nd event cancelled due to weather. 2022 will be the 1st Sunday of the month. Add some special events such as the May 15th Lunar Eclipse.
D. Library Telescope Committee a. 2021 Budget – $300, balance $235 b. Upcoming builds or maintenance events c. Maintenance 2021 budget - $100, balance $35 d. Mileage reimbursement – see above
e. Promotional materials 2021 budget $200, balance $200
E. SLAS Social Events
a. 2022 Budget and 2021 Budget - $300
b. Homemade Fest – $100 2021 budget, Balance $100 Will check on room for February Action: Jim to contact Kirkwood, move to March because of COVID surge. Might try to add virtual camera.
c. Star-B-Q - $200 2021 budget, Balance -$1
Other
F. SLAS Brochures a. 2022 Budget - $600 and 2021 Budget $200, balance $200 b. Quarter cards
G. Loaner scope Program
a. 2022 Budget and 2021 Budget - $100, Balance $4100
b. New donations Meade 60mm donation
c. Replacement Parts for the LPTs
d. Items for sale **several:**
H. SLAS Library a. 2022 Budget and 2021 Budget - $500, Balance - $2.6 b. Other –
I. Merchandise 2022 Budget - $650 and 2021 Budget $0
J. Telescope Making
K. Newsletter a. 2022 Budget and 2021 Budget $600. Balance -$40
L. Website - a. 2022 Budget - $750 and 2021 Budget $690, balance $450 (no Zoom or group.io)
M. Social Networking SLAS Public FB page - 1513 likes, 1731 Followers SLAS Private FB page - 77 membersJefferson College Observatory FB page – 444 likes, 490 followers
N. Night Sky Network
O. SLASdialogs 160 Members as of 1-6-2022 groups.io premium plan is $110/yr. SLAS has been downgraded to a free version with limited storage. Do we want to upgrade to premium? Motion: by Jim Small to renew Premium membership with groups.io up to a cost of $220/yr. Seconded by Brad W. Motion passed. Action: Jim will renew Premium membership for 2022. Mark will send notice to SLAS members encouraging them to take advantage of premium features related to setting up photo albums. Board to reevaluate for 2023 renewal.
P. Dark Site
Q. Observing Programs
R. Star Parties Donation: 2021 donations $1565
11. Closing Activities Motion to adjourn Brad W and second by Bill W. Meeting adjourned at 9:38pm

St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
January 2022

	Jan 22	Budget	$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	25.00		25.00
Magazine Subscription	321.75	345.80	(24.05)
Membership Dues	230.00	505.00	(275.00)
Merchandise Sales		65.00	(65.00)
Total Income	576.75	915.80	(339.05)
Cost of Goods Sold			
Magazine Subscriptions	321.75	345.80	(24.05)
Total COGS	321.75	345.80	(24.05)
Gross Profit	255.00	570.00	(315.00)
Expense			
1-Programs & Events	346.00	400.00	(54.00)
3-Library expense		125.00	(125.00)
6-Brochures		50.00	(50.00)
8-Website	215.28	250.00	(34.72)
9-Administrative Expenses			
Depreciation Expense	276.90	276.90	
Paypal Fees	5.66	10.00	(4.34)
Postage		20.00	(20.00)
Total 9-Administrative Expen...	282.56	306.90	(24.34)
Total Expense	843.84	1,131.90	(288.06)
Net Ordinary Income	(588.84)	(561.90)	(26.94)
Other Income/Expense			
Other Income	2.80	4.00	(1.20)
Net Other Income	2.80	4.00	(1.20)
Net Income	(586.04)	(557.90)	(28.14)

St. Louis Astronomical Society
Balance Sheet
As of January 31, 2022

	Dec 31, 21	Jan 31, 22
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	7,447.09	6,716.43
Deposit, Certificate of	15,952.97	15,952.97
Library Telescope Escrow	797.00	797.00
PayPal	705.80	356.97
Savings - First Bank	41,149.86	41,150.21
Total Checking/Savings	66,052.72	64,973.58
Other Current Assets		
Inventory Asset	675.61	675.61
Investment in Mid-States 2...	2,000.00	2,000.00
Total Other Current Assets	2,675.61	2,675.61
Total Current Assets	68,728.33	67,649.19
Fixed Assets	15,783.04	15,506.14
TOTAL ASSETS	84,511.37	83,155.33
LIABILITIES & EQUITY		
Liabilities		
Current Liabilities		
Accounts Payable	770.00	0.00
Total Current Liabilities	770.00	0.00
Total Liabilities	770.00	0.00
Equity		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	74,279.95	75,243.71
Net Income	963.76	(586.04)
Total Equity	83,741.37	83,155.33
TOTAL LIABILITIES & EQUITY	84,511.37	83,155.33

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

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 for 2022: Mar 3, Apr 7, May 5, Jun 2, Jul 7, Aug 4, Sep 1, Oct 6, Nov 3, Dec 1

SLAS Dark Sky Observing Dates Feb 26, Mar 26, April 2, April 30, May 28, June 25, July 23, July 30, Aug 27, Sept 24, Oct 22, Nov 26, Dec 17

Francis Park Events: These events are on Wednesdays of the week nearest the first quarter Moon April 6, May 4, June 8, July 6, August 3, August 31, Sept 28, Oct 5,

Aim for the Stars Public events held on 1st Sundays at the Jefferson College Observatory and Patio. Feb 6, Mar 6, April 3, May 1, June 5, July 3, Aug 7, Sept 4, Oct 2, Nov 6, Dec 4

Stargazing at the Arch Events for the public held at the Gateway Arch
May 28, June 12, July 10, Aug 14, Sept 3, Oct 8

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!
Feb 20 (BSP), March 6 (JCO), April 24 (BSP), May 1 (JCO), June 26 (BSP), July 3 (JCO), Sept 4 (JCO), Nov 6 (JC)),

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.

SLAS Events

February

18 Fri	SLAS Regular Meeting
20 Sun	SLAS Orienteering at Babler
21 Mon	Constellation Tour #74
24 Thur	SLAS New Member Zoom Chat
26 Sat	SLAS Dark Sky Observing

March

3 Thur	SLAS Board Meeting
6 Sun	Aim for the Stars (JCO)
6 Sun	SLAS Orienteering at JCO
7 Mon	Constellation Tour #75
8 Tue	Girl Scout Troop 1171
11 Fri	Cub Scout Pack 778
14 Mon	Constellation Tour #76
18 Fri	SLAS Regular Meeting
21 Mon	Constellation Tour #77
24 Thur	SLAS New Member Zoom Chat
26 Sat	SLAS Dark Sky Observing

April

2 Sat	SLAS Dark Sky Observing
3 Sun	Aim for the Stars (JCO)
4 Mon	Constellation Tour #78
6 Wed	Francis Park Stargazing
6 Wed	Manchester Parks Fussne
7 Thur	SLAS Board Meeting
11 Mon	St Louis Public Library
11 Mon	Constellation Tour #79
15 Fri	SLAS Regular Meeting
18 Mon	Constellation Tour #80
21 Thur	SLAS New Member Zoom Chat
23 Sat	SLAS Homemade Fest
24 Sun	SLAS Orienteering at Babler
30 Sat	SLAS Dark Sky Observing

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

SLAS Merchandise Available

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

There is now only one location:
1065 Regency Parkway, St. Charles MO 63303
Telephone: 314.528-8100
sales@headznthreadz.com
Simply take the garment, hat, etc you wish to have embroidered and they will take care of it. They have the SLAS logo on file. You may make modifications to the colors if you wish.

SLAS Logo is also available at www.Infini-tees.com

SLAS MEMBERSHIP APPLICATION

Name: Last _____

First, Middle Initial _____

Address _____

City, State, Zip Code _____

email address _____

Please send completed form with check (no cash please) made payable to

St Louis Astronomical Society

Don Ficken, Membership
13024 Barrett Crossing CT
St. Louis, MO 63122

Youth @ $10.00 / 1 year (18 yrs or younger) $_____

Individual @ $25.00 / 1 year $_____

Family @ $40.00/1 year $_____

Publications with discount available with your SLAS membership:

Sky and Telescope @ $43.95 / 1 year $_____

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

Astronomy @ $34.00 / 1 year $_____

TOTAL ENCLOSED **$_____**

Check all that apply:

___ Renewal
___ Address Change Only
___ Please send my newsletter by regular mail
___ ***New Member!***

SLAS OFFICERS

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

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

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

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

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

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board22 at slasonline.org

Tom Nickelson 314-346-9565
board23 at slasonline.org

Brent Buch 314-239-0329
board24 at slasonline.org

ALCOR ***Bill Winningham*** 636-357-2763
(Astronomical League Correspondent)
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webmaster at slasonline.org

Devoted to the Interest and Advancement of the Science of Astronomy

ST. LOUIS ASTRONOMICAL SOCIETY

We're on the Web!
http://www.slasonline.org

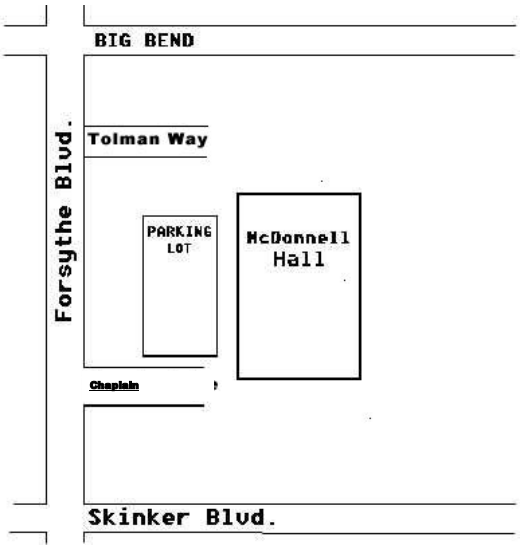
Follow us on
Twitter: @stlastro
Facebook: @stlastro

Who We Are and What We Do

St. Louis Astronomical Society is a not-for-profit organization established in 1936. SLAS is devoted to the interest and advancement of the science of astronomy. Our mission is to promote an understanding of the science of astronomy to our members and to the public. Membership is open to any-one with an interest in astronomy.

For more information contact any SLAS officer or visit our website listed above. SLAS is affiliated with the Astronomical League, Night Sky Network and the Mid-States Region of the Astronomical League.

Meetings are held the 3rd Friday of each month at McDonnell Hall at Washington University. See the map to the right for directions.



St. Louis Astronomical Society
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