THE EVENT HORIZON

ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

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March, 2022

The Steps of Making a Mirror or Why I Do It the Way I Do It

by

Michael E. Lockwood
Lockwood Custom Optics

Michael E. Lockwood of Lockwood Custom Optics will be featured at the March 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, March 18. Zoom access information is posted on the Society's website, www.slasonline.org . The event, cosponsored by NASA's Missouri Space Grant Consortium, is open to the public free of charge.

Mirror making of the 21st Century has advanced to the point that mirrors are larger but more compact than ever before. To accomplish this, modern professional mirror makers are using state-of-the-art techniques and equipment to shape the concave surface of the mirrors. They achieve accuracies not possible for amateur or commercial telescope makers. Michael Lockwood, will discuss some of the equipment and techniques he uses to make some of the best telescope mirrors ever produced for the amateur and professional astronomer.

Michael Lockwood worked as a research engineer at the Beckman Institute of the University of Illinois from 2000 until 2009. He founded Lockwood Custom Optics in 2006, specializing in making custom telescope mirrors. In 2009, he left his engineering position to become a full-time professional optician. Mike has been involved with building tens of telescopes, up to 50" in aperture. He has taught telescope making and mirror making classes and written articles for Sky & Telescope and Amateur Astronomy Magazine.

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)

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

MSRAL Convention: June 3-5 @ Jefferson College Observatory and Washington University!
Mark your calendar! See inside for details.

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President's Corner

by

Jim Small

MSRAL 2022 registration is LIVE! Be sure to check the SLAS web page for the latest info. Star-B-Q at the Jefferson College Observatory, meetings hosted by the physics department at Wash U, banquet at the Knight Center. It's looking to be a great meeting and IN PERSON! Here is the web page: **https://slasonline.org/events/msral**

Homemade fest is BACK! April 23rd will be the date. We have our usual room at the Kirkwood Community Center. Looking forward to having this event and finding out what everyone's been up to for the last two years! Get a presentation together and let us know what you've been doing. Don't forget to bring a dish. The jambalaya will be there!

In the last few weeks we've had two Meade 8" SCT setups donated as well as a Meade ETX 90 and a 60mm refractor. Once the equipment is evaluated, some of it might be sold off. There is a chance we might bring some of it to Homemade Fest to offer up a potential swap meet. If you have items for sale, you might consider bringing them to the community center to swap or sell. We have other items for sale, too. Watch the newsletter for the full list.

Star Parties are coming back in full force as we are having scout and some school events booked over the next couple of months. Watch the events page for the upcoming list of possible events to volunteer for.

Speaking of volunteering, Mark Jones has an article on Outreach Volunteering in this newsletter. It includes LOTS of information about what to expect when you do outreach as well as many tips and techniques. Beginner or master, there is a wealth of ideas available as a resource. I strongly encourage you to get involved and experience the joy that is a good night of contact with others through astronomy! Be sure to check out the resources.

The McDonnell Distinguished Lecture Series for 2022 features Vicctoria Kaspi with "The Fast Radio Sky" this month on Thursday, March 31 at 7:00 pm. These lectures are always top notch and worth the effort to attend. It will take place in Whitaker Hall room 100. You may attend in person or on Zoom. The registration link is at **https://mcss.wustl.edu/events/public-lecture-fast-radio-sky?d=2022-03-31**

Check the events page for more to do and get involved!

The next meeting for the MSRAL committee is Wednesday night at 6pm via the usual Zoom link.

Clear Skies, Jim Small

Mark Your Calendars Now! Meeting IN PERSON!!

Homemade Fest 2022

Kirkwood Community Center, Room 300, Kirkwood Park

Saturday Evening, April 23, 2022

Enter by the flagpole, doors open at 5:00pm to unload equipment, elevator available. Bring items for swap meet!! Bring SLAS Memorabilia! Please arrive early.

We will begin eating as soon as the food is ready. Since dinner is potluck, everyone is asked to bring a dish. The club will furnish the beverages, bread, paper plates, utensils, etc.

The formal opening and presentations will begin at approximately 6: 45 p.m.

The cleverness, creativity and talent of our members is truly impressive. So bring a favorite dish, have a great meal, then sit back and enjoy some fun presentations.

See Bradley Waller if you wish to make a presentation! Computer and projector will be available to use. Tell us about anything related to astronomy. Perhaps a new item or process you bought, built, or learned how to use!

MSRAL 2022 CONVENTION

Friday, June 3 - Sunday, June 5

Jefferson College Observatory

Washington University

Registration is LIVE!

This is an IN-Person event!

For more information and to complete the registration, visit the MSRAL 2022 page on our website at

https://www.slasonline.org/events/msral

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**

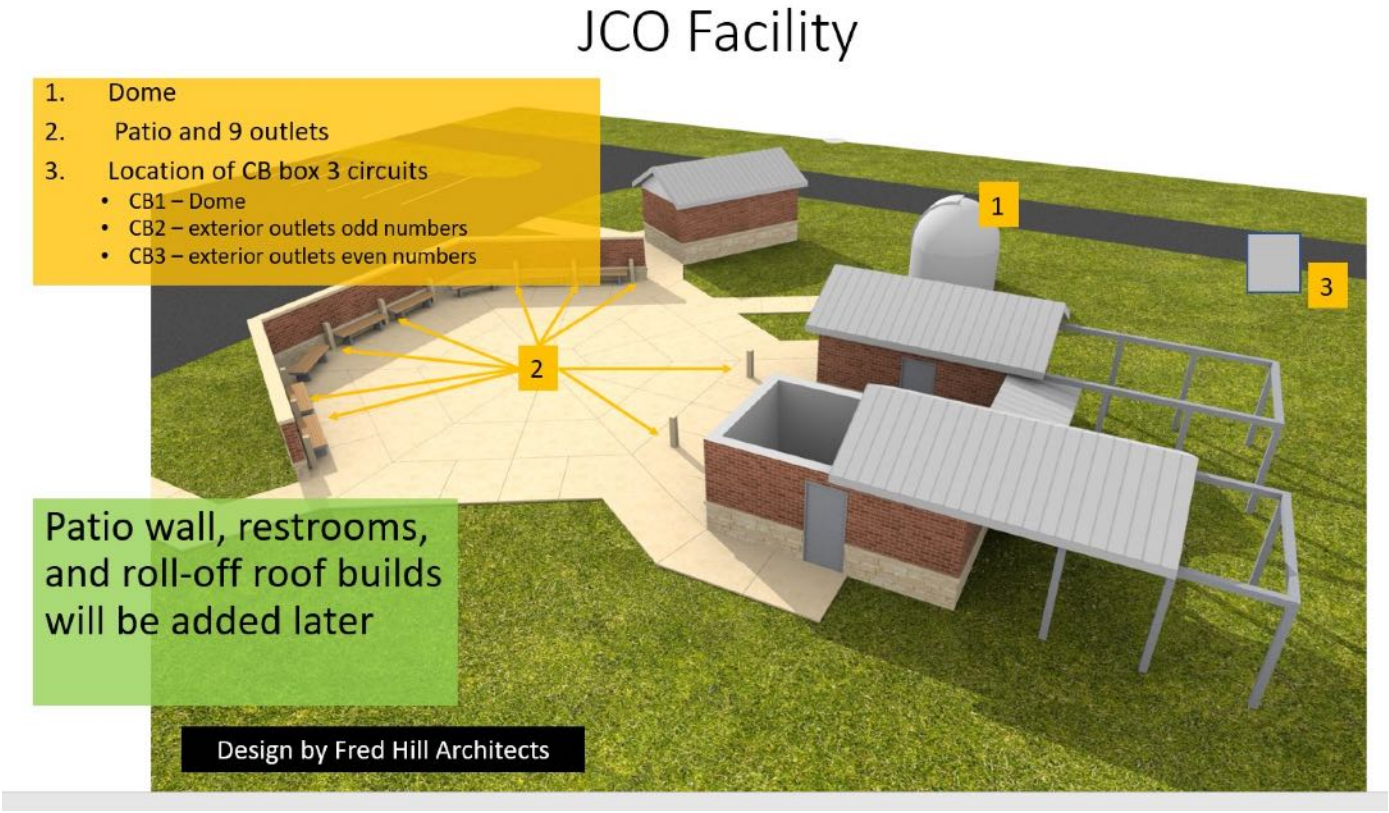
Contact Greg Rigelman at gregrigelman@sbcglobal.net or 636-484-4293

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!

The Jefferson College SLAS Observing Patio is Open for Use

***by* Mark Jones**

Jefferson College (College) and the St Louis Astronomical Society (SLAS) have established an astronomical observing facility on the college campus. Both SLAS and the college will have joint user rights to this facility. Access to the facility will include entry to campus from Farm Road (road north of ballfields). Access to the softball field parking lot; and access to the observing patio and adjacent field. SLAS members are welcome to use this site on any evening that the college campus is open. Members should aware that events already scheduled by the college will take priority. The ball fields are not lighted and there should not be any night games or light interference. Electrical power outlets are available on the Patio for member use. Three porta-potties are next to the parking lot. Members should bring their own water, chairs, and equipment. Please read all the guidelines below.



General Access Guidelines for Using the Jefferson College Observatory Patio

1. SLAS members must contact campus police upon arrival using campus police number (636) 481-3500. Identify yourself as a member of SLAS and that you will be using the patio area for several hours
2. SLAS members will be responsible for their own safety and conduct
3. Food and drink (within campus rules) can be brought to facility but must be removed at end of event
4. SLAS members must contact campus police for any safety or emergency issues
5. All attendees must park in designated areas, normally the softball field parking lot
6. Parking on roadways and blocking exits is not allowed
7. SLAS members wishing to use the facility for personal use do NOT need to schedule in advance but should aware that events already scheduled by the college will take priority
8. SLAS members are encouraged to schedule their events using Night Sky Network or by sending an email to contactus@slasonline.org.
9. The College and SLAS Observatory Committee maintain an official schedule for planned events and student instruction. In case of conflicting priorities, the Observatory Committee shall make final decision. Contact contactus@slasonline.org, for any questions.
10. There are no restrictions on times to be scheduled but in general times will be between sunset and sunrise.
11. Events must be cancelled if the campus is closed due to weather or emergency
12. All College campus rules of conduct must be followed

Happy Observing!

SLAS Public Outreach Training Materials Now Available

by

Mark Jones

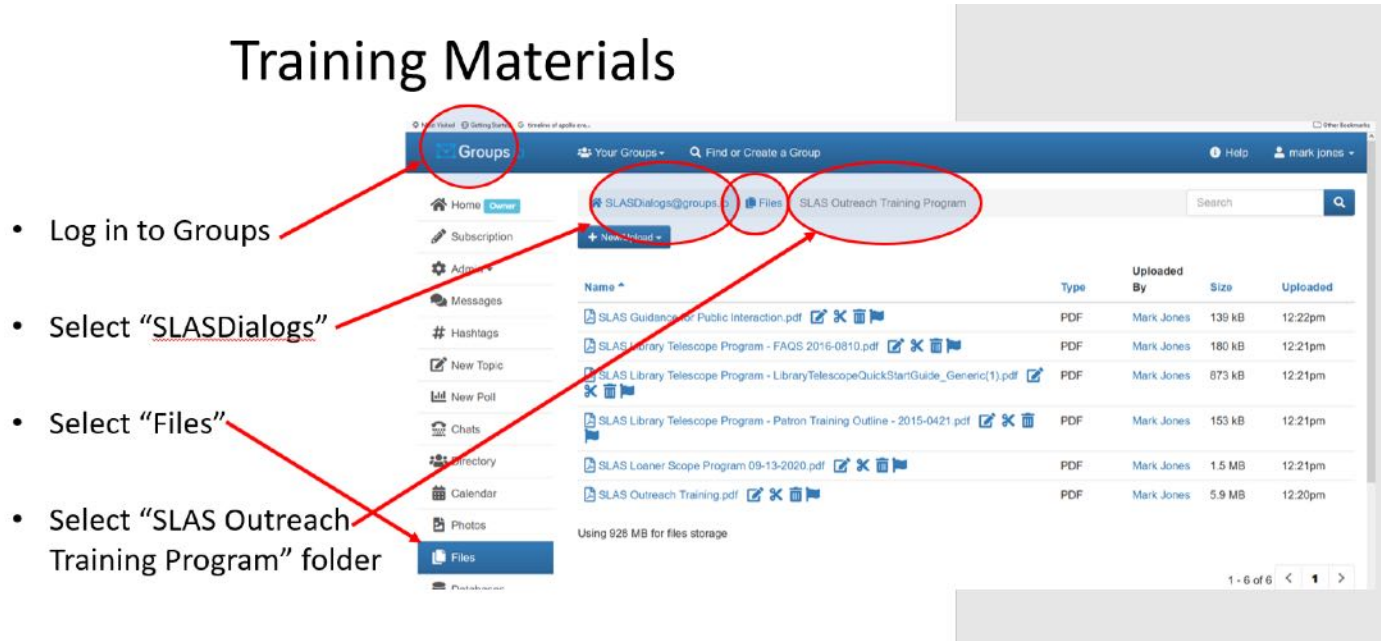
Public outreach is one of the really fun activities SLAS members can participate in. Outreach activities include Library Telescope Training session at local libraries; Telescope viewing at the Planetarium and other locations; STEM events at schools; and large outdoor events like the STL Airshow. Between 20 and 30 members every year volunteer their time for one or more of the events. You do not need to be an expert in any field, but be a fellow Astro enthusiast and share your love for the hobby.

Club specific monthly events include: Sundays – Jefferson College Observatory; Wednesdays – Francis Park; Fridays at Science Center; Saturdays – Gateway Arch; and M-F nights at St Louis Library branches

Front

SLAS does NOT require training for anyone wishing to volunteer for outreach. However, this year SLAS created an Outreach Training Program to help members become more confident in performing outreach and to inform members on the resources SLAS has available. Did you know that SLAS has telescopes you can use for outreach. That SLAS Moon, Earth, Mars and Pluto globes you can use for STEM activities. Or that SLAS has solar telescopes and meteorites exhibits. SLAS has banners, tablecloths and signs to use at display tables. Finally, that Night Sky Network and SLAS have toolkits and videos that can help give you engage the public young and old.

The training materials can be found on the SLASDialogs.groups.io website. The training can be done at your own speed, just download and read the training materials. For those who decide to complete the training you can receive a SLAS Volunteer badge and you will also be eligible to receive a SLAS Volunteer t-shirt.



To access the materials go to:

https://groups.io/g/SLASDialogs/files/SLAS%20Outreach%20Training%20Program

or follow the figure above

If you do not have access SLASDialogs.groups.io, or you want the materials send directly to you just send a message to contactus@slasonline.org.

Above: Photo by Jeff Capentier

Messing around after having trained PEC on the CGX the night before, I used the L-extreme to grab this one of the Horsehead with the 9.25" Edge w/ Hyperstar V 4 and the ASI294 MC Pro w/L-extreme at 325gn 30sec exposure. Since the training of PEC I have achieved 6 minute exposure now! That's as far as I have pushed it.

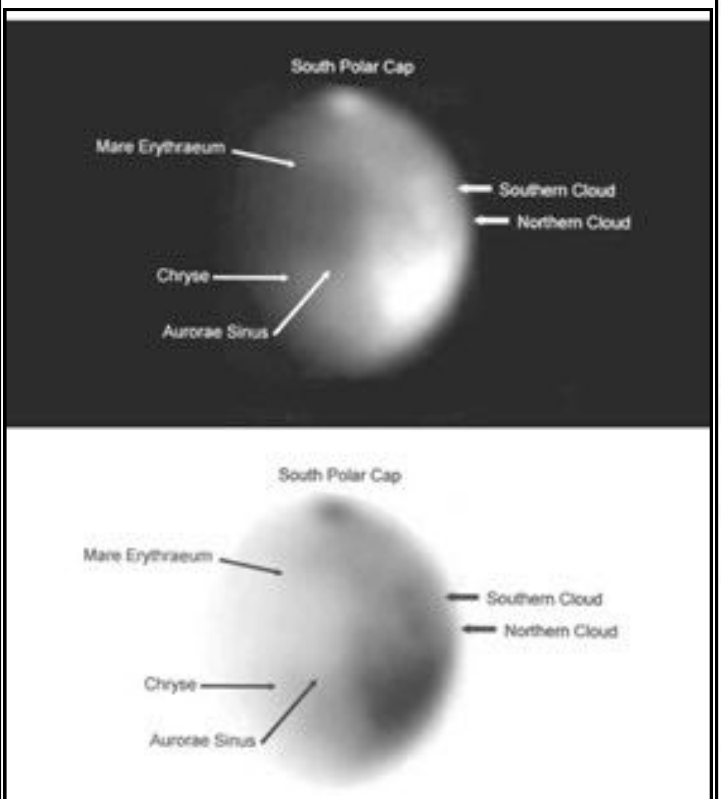
Left: Photo by Jesus A PoncedeLeon

Thor's Helmet in the south in Canis Major at 12,000 light years Imaged with a 76 triplet Sharpstar using a zwo533pro camera. Taken during the last week of February and first week of March 2022.

SLAS Member Jim Melka Work Published in Astronomy and Strolling Astronomer
by Mark Jones

SLAS' Mars expert Jim Melka has published his observations of a possible comet/meteor impact on Mars in 1973. Yon can read about it on page 15 in the February 2021 Astronomy Magazine. Stephen James O'Meara's Secret Sky article is about a probable comet impact on Mars. Using images by Jim Melka (and other 1973 McDonnell Douglas Astronomy Club members) along with survey missions were used to find new craters. Comparing pre-1973 Mars images from Mariner 9 (1971-72) and post-1973 images taken from Viking Orbiter (1975-76). New impact craters were found on Mars in the expected locations for the clouds photographed by Jim and colleagues in 1973.

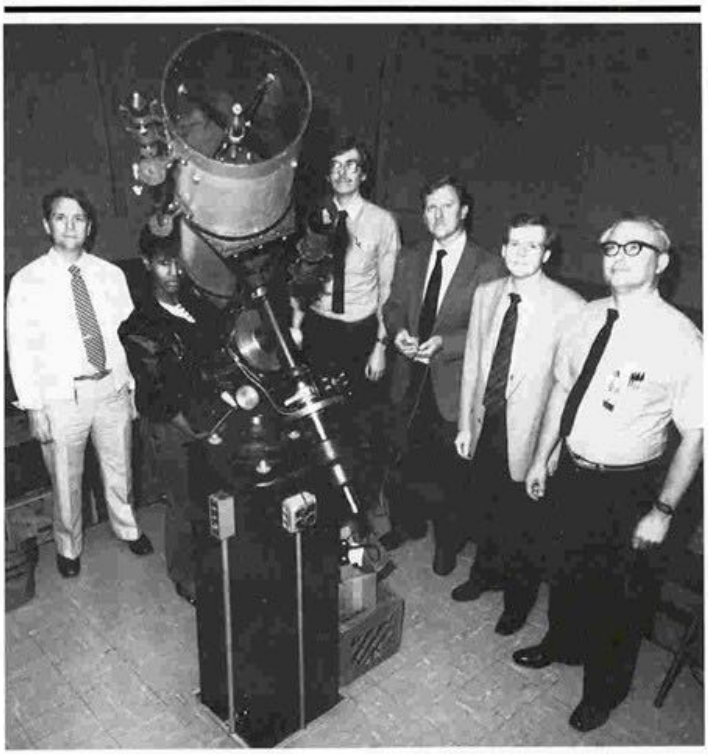
The image of the peculiar clouds. Digitally scanned positive and negative reproductions of a grayscale photograph of Mars made by Jim Melka and Rick Melvin, observing from St. Louis, MO, USA, on September 2, 1973, at 07:50 UT. Newtonian telescope of 8-inch aperture, 35 mm single lens reflex camera



Jim Melka wrote recently. "At the time when Rick Melvin and I were imaging on September 2nd 1973, we didn't know what produced the large white clouds. It wasn't until sometime in the mid-80s that the answer became clear. A Wash-U grad student gave a talk at a SLAS meeting about the known state of water on Mars at that time. Right after that I showed the Sept. 2nd image with the clouds saying we didn't know the source. But she volunteered that would be the appearance she would expect if a comet had hit Mars. I gasped and thought to myself 'well of course a comet could have enough ice to produce the white clouds. Over 30 years later, I finally wrote the paper for the Journal of the ALPO. If interested you can read it at Comet Impact . www.alpo-astronomy.org/marsblog/wp-content/uploads/2020/06/Comet-Impact-on-Mars2.pdf

Jim Melka has been a SLAS member since 1954, congratulations to Jim and the other local astronomers.

The 1985 photo below shows Jim Melka on far left and Rick Melvin on far right. In 1985, members of the McDonnell Astronomy Club were refurbishing the telescope at the Pattonville Observatory



Denise Watson, a Pattonville student, peeks from behind a telescope in the district's new observatory. Behind her are volunteer members of the St. Louis Astro Society and the McDonnell Astro Club, who are working through CHIP with the district's coordinator to program viewings of planets, nebulae, the moon and stars. They are, from left, Mark Jones, Jim Melka, Rick Melvin, Dave Rapp and Al Trodus.

Photo by Rich Rau

McDonnell Distinguished Lecture Series 2022 Public Lecture

The Fast Radio Sky

by Victoria Kaspi
Professor, McGill University
Thursday, March 31, 7:00pm

Whitaker Hall Room 100 and on Zoom* (*registration required at link below)
For more info: https://mcss.wustl.edu/events/public-lecture-fast-radio-sky?d=2022-03-31

St. Louis Astronomical Society
Devoted to the Interest and Advancement of the Science of Astronomy
Executive Board Meeting Minutes 2/3/2022

1. Opening Activities a. Attendance: Jim Small, Larry Campbell, John Newcomer, Bill Winningham, Brent Buch, Brad Waller, Mark Jones, Dave Peckham b. Open Meeting: meeting opened at 7:03pm c. Approval of last month's meeting minutes approved. Motion to approve minutes with changes, by Brent Buch, second by Larry Campbell. Minutes approved d. Next Board meeting date: Dates for 2022: 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**: Kazumori Akiyama b. Special Awards needed: NSN Awards this month, perpetual coming c. Speaker Press Release: Action: Brad to contact February speaker and confirm and get bio info d. Special Business needed: None e. A101: Volunteer Training Program, MSRAL volunteers needed

3. SLAS Financial Report 2021 financials are closed out. a. Balance Sheet for 2021 total $85,342; b. Profit/Loss report for 2021 net income $1794. c. Annual Budget meetings. Start in Septemberd. Corporate filings: every year in August form 990, due May 15 of each year

4. Speaker Committee a. 2022 Budget - $400 b. Upcoming speakers:

SLAS Monthly Meetings
Presentations 2021-2022

Month	Name	Topic	Sponsor
21-Jan-2022	Stephen Hummel	Preserving the Night Sky	McDonald Observatory
18-Feb-2022	Kazumori Akiyama	Event Horizon Telescope	MIT
18-Mar-2022	Michael Lockwood	The Steps of Making a Mirror or Why I do it the way I do it	
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 TBA MIT	
16-Dec-2022	Open		

d. Topics of interest - James Webb Space Telescope and speaker Katie Bouman on Event Horizon e. Stipends - none f. Travel - none

5. Membership Initiatives a. 2022 Budget - $500, balance $500 b. Welcome Aboard Meetings c. Raffles d. Attendance prizes this month

6. Membership Recognition a. 2022 Budget $550, Balance $204 (bought plaques for Special Recognition and NSN pins) b. NSN Outreach Awards: 26 Pins ordered and received. Should be able to present at February Meeting. Pins came in case. Do we want to mails in cases? 2021 spent $56.80. Action: Brad will print certificates and get together with Jim Small to distribute the certificates and pins. c. Membership Report: The January 2022 membership report shows 228 members. The membership count represents a decline of 17 members from the beginning of the year. We have several members who have not yet renewed. Hopefully this is timing. Action: Bill will send out second renewal notice to those expired memberships over last 12 months. d. Member anniversary – Usually awarded in November. We have 2 members that have been that just reached more than 35 years and we don't have pins higher than 30 years. Larry mentioned that current supplier only has pins from 0-30years at $4.00 each. We need a different did find a pins from Crown Awards for $10 to cover 35, 40, 45, 50 years. Action: Larry to purchase two 35-year pins for John B and Larry D. e. New Award program - $600 Start up 2020 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: usually May/June
4. Nomination reviews: usually July/Aug
5. Award selection: usually Sep
6. Plaques purchased: usually October
7. Awards presented: usually December

7. Outreach - a. 2022 Budget - $620, balance $620 b. Member Training Program Status: c. Purchase of T-shirts for volunteers completed training d. Purchase of lawn signs: e. Upcoming outreach events: f. Outreach Awards/recognitions, usually in Feb g. NSN Outreach hours YTD

8. Old Business: a. Training Program

Per mark Jones - I have been working on training materials for members related to Outreach and to the JCO observatory operator I created 2 new folders in SLASDialogs for these training programs. Each program is separate. Each program has a certificate which describes the training program. For Outreach, each member must complete the materials and then participate in 2 Outreach events. Everyone who completes the training will be eligible for a SLAS volunteer badge and T-shirt. For JCO training, each member will qualify as an Observatory Operator after completing the materials and 2 hours of on-site instruction. We only need 3 to 4 more members trained. This training will be offered to only a few members, Everyone who completes the training will be eligible for a JCO Observatory Operators badge and access keys to the Observatory. I have placed training materials on SLASDialogs.

1. SLAS Outreach training materials https://groups.io/g/SLASDialogs/files/SLAS%20Outreach%20Training%20Program **and 2. SLAS Observatory training Materials** https://groups.io/g/SLASDialogs/files/JeffCo%20Observatory/Training%20Materials%20for%20JCO The idea is members can download and go thru the materials on their own or participate in Zoom training

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 February 16. Preliminary pricing for convention fees are budgeted at: Cook is planning on lunch priced at $20 Cook has Banquet priced at $45 (total $2055 for 55 people) Cook for Star-B-Q not priced yet but likely $20 Cook for registration not priced yet but likely $35

A. SLSC Business: a. First Friday actions b. Other immediate business

B. SLCL Business a. Annual contract –

b. Upcoming events – Next event 2-10-2022 Presented by the St. Louis Astronomical Society. Learn about Hubble's primary successor, the Webb Space Telescope, and look at some of its planned targets, including star formations near the center of the Milky Way, extremely distant galaxies, and the detection of Earth-sized planets around other stars.

C. Jefferson College Business: a. Committee Meeting report: None b. Upcoming Outreach Event: Sunday at the Observatory: 2022 will be 1st Sunday of the month. Add some special events. 2-21-2022 From Bob Brazzle: I asked Daryl Gehbauer about a proposal presented last week to the board to have wi-fi installed in the observatory area. Here is his response: It passed with flying colors. We expect the work to start soon; meeting with them next week to go over the paperwork. We will keep you abreast of the progress.

D. Library Telescope Committee a. Budget – $300 b. Upcoming builds or maintenance events - next event 2/12/2022 c. Maintenance budget - $100 d. Mileage re-imbursement – see above e. Promotional materials - $200

E. SLAS Social Events a. 2022 Budget - $300 b. Homemade Fest - $100 budget Action: Jim to contact Kirkwood, move to March because of COVID surge. Might try to add virtual camera c. Star-B-Q - $200 budget

Other

F. SLAS Brochures a. 2022 Budget $200 b. Quarter cards

G. Loaner scope Program a. 2022 Budget - $100 b. New donations 2 more telescope 8" SCT Meade LX-90, Meade MAK ETX-90, tripod, eyepieces c. Replacement Parts for the LPTs d. Items for sale **several:**

H. SLAS Library a. 2022 Budget - $500 b. Other – new RASC 2022 Handbook

I. Merchandise J. Telescope Making K. Newsletter a. 2022 Budget $600 **L. Website** - a. 2022 Budget $690, Balance $474 (expense paid so far in 2022 to website budget $215.28)

M. Social Networking N. Night Sky Network

O. SLASdialogs - $110/yr comes out of Website budget

P. Dark Site Q. Observing Programs R. Star Parties Donation:

11. Closing Activities Motion to adjourn Brad second Larry meeting adjourned 9:35pm

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

	Jan - Feb 22	Budget	$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	25.00		25.00
Magazine Subscription	633.55	769.55	(136.00)
Membership Dues	810.00	935.00	(125.00)
Merchandise Sales			
General Merchandise		130.00	(130.00)
Total Merchandise Sales		130.00	(130.00)
Total Income	1,468.55	1,834.55	(366.00)
Cost of Goods Sold			
Magazine Subscriptions	633.55	769.55	(136.00)
Total COGS	633.55	769.55	(136.00)
Gross Profit	835.00	1,065.00	(230.00)
Expense			
1-Programs & Events	346.00	500.00	(154.00)
3-Library expense		125.00	(125.00)
6-Brochures		100.00	(100.00)
8-Website	215.28	250.00	(34.72)
9-Administrative Expen...	334.18	613.80	(279.62)
Total Expense	895.46	1,588.80	(693.34)
Net Ordinary Income	(60.46)	(523.80)	463.34
Other Income/Expense			
Other Income			
Donations	52.45		52.45
Interest Income	0.35	8.00	(7.65)
LTP Receipts	29.65		29.65
Proceeds from Lens Sales	2,151.96		
Total Other Income	2,234.41	8.00	2,226.41
Net Other Income	2,234.41	8.00	2,226.41
Net Income	**2,173.95**	**(515.80)**	**2,689.75**

St. Louis Astronomical Society
Balance Sheet
As of February 28, 2022

	Dec 31, 21	Feb 28, 22
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	7,447.09	9,404.73
Deposit, Certificate of	15,952.97	15,952.97
Library Telescope Escrow	797.00	797.00
PayPal	705.80	394.60
Savings - First Bank	41,149.86	41,150.21
Total Checking/Savings	66,052.72	67,699.51
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	70,375.12
Fixed Assets	15,783.04	15,506.14
TOTAL ASSETS	**84,511.37**	**85,881.26**
LIABILITIES & EQUITY		
Liabilities		
Current Liabilities		
Accounts Payable		
Accounts Payable	770.00	0.00
Total 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	2,139.89
Total Equity	83,741.37	85,881.26
TOTAL LIABILITIES & EQUITY	**84,511.37**	**85,881.26**

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

SLAS Dark Sky Observing Dates 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.
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!
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

March

18 Fri	SLAS Regular Meeting
21 Mon	Constellation Tour #77
23 Wed	Pack 451 at JCCO
24 Thur	SLAS New Member Zoom Chat
26 Sat	SLAS Dark Sky Observing
31 Thur	The Fast Radio Sky - Wash U

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 Fussner Park
7 Thur	SLAS Board Meeting
9 Sat	Cub Scouts at Babler
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
28 Thur	Wild Horse Elementary
30 Sat	SLAS Dark Sky Observing

May

1 Sun	Aim for the Stars - JCO
2 Mon	Constellation Tour 81
4 Wed	Francis Park Stargazing
5 Thur	SLAS Board Meeting
6 Fri	Snores & Smores
7 Sat	National Astronomy Day
7 Sat	Crestwood Park
9 Mon	Constellation Tour 882
15 Sun	Total Lunar Eclipse Viewing at JCO

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

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

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Hospitality ***Larry Campbell*** 636-244-2867
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ALCOR ***Bill Winningham*** 636-357-2763
(Astronomical League Correspondent)
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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

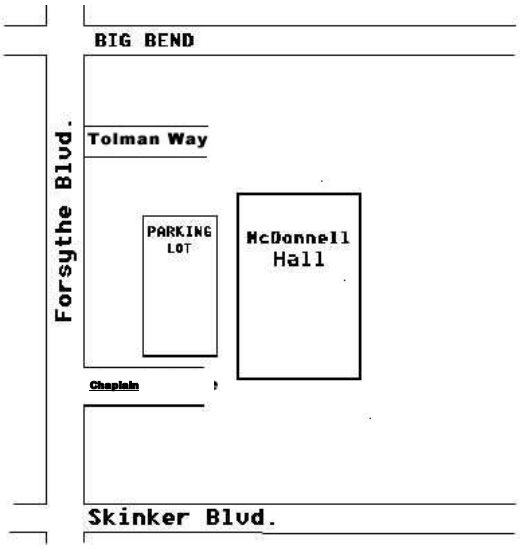
Follow us on
Twitter: @stlastro
Facebook: @stlastro

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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