

THE EVENT HORIZON



ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

VOLUME 30, Issue 3
March, 2020

Carl Lampland, Pioneering Infrared Astronomer

by
Joe Marcus
St Louis Astronomical Society

Dr. Joseph Marcus of the Saint Louis Astronomical Society, will be featured at the March meeting of the Society. The meeting will begin at 7:30 PM Friday, March 20 and **will be a Zoom Conference meeting for EVERYONE. There will be NO physical presence at Washington University for this meeting.** Information about how to join the meeting may be found below.

Until about a century ago, we observed the universe using light emitted by stars or reflected by planets and moons. Beginning in 1920, astronomers “looked” at stars and then planets using infrared radiation (IR). We sense IR directly as heat. Physicist William Coblentz designed an instrument to measure the temperature of stars. Working with astronomer Carl Lampland, they modified the instrument so that it could detect and record the heat reflected by planets and the Moon. Lampland’s research discoveries included the cold temperature of Jupiter’s upper atmosphere, the very hot temperature of Ve-

nus, the relatively mild temperature of parts of daytime Mars, and the temperatures of some comets. Dr. Marcus will explain how the Coblentz-Lampland heat detectors worked and how their research greatly improved our knowledge of the planets.

Dr. Joseph Marcus is a retired pathologist and veteran amateur astronomer with particular interest in comets. He edited the internationally circulated Comet News Service, based at the McDonnell Planetarium in Forest Park, between 1975 and 1986. He has continued his comet research and disseminated results in scientific journals and in lectures to both technical and general audiences.

Upcoming Presentations for 2020

April Raymond E Arvidson, PhD What Controls Planetary Climates Washington University
May William McKinnon, PhD Something about Ultima Thule of Course! Washington University
June Vayujeet Gokhale, PhD The Science of Light Pollution Truman State University
July Amy E Kimball, PhD Radio Quasars & the VLA National Radio Astronomy Observatory (Zoom)
August Jeffrey Gillis-Davis, PhD Apollo XIII Plus 50 Years Washington University
October Marco Cavaglia, PhD Gravitational Waves Part II University of Missouri: S & T

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Joining a Zoom Conference Meeting: Everyone can join!

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 7-11pm.

Below is the invitation to join:

Join Zoom Meeting for SLAS Regular Meeting with computer or smartphone

<https://zoom.us/j/8604505790>

Meeting ID: 860 450 5790

One tap mobile

+13126266799,,8604505790# US (Chicago)

+19292056099,,8604505790# US (New York)

Dial by phone using your location (any will work)

+1 312 626 6799 US (Chicago)

+1 253 215 8782 US

+1 301 715 8592 US

Meeting ID: 860 450 5790

If you need help joining the meeting, don't hesitate to call Jim Small at 314-307-0692!!

President's Corner

by
Jim Small

As I write this, I am self-quarantined at my home and I'm running a Zoom Conference for folks to practice joining and using Zoom. It is open for my students at ECC, the faculty at ECC, and St. Louis Astronomical Society members. I will keep it running at least through midnight Wednesday night, perhaps longer. Watch your email to check on status. It would be great to see you!

Due to the demographic of our usual audience, it was decided against holding a meeting in person for the foreseeable future. Hence the decision to hold meetings via Zoom.

The SLAS Regular meetings for March, April and May will be via Zoom conference only. The status of June will be discussed as time goes on. The reason for this is Washington University has closed campus until then, even cancelling graduation which is the same night at our May meeting

To join the meetings, see the article on the front page for instructions and a link. So far it has worked really well! I had the pleasure of seeing half a dozen members yesterday during the practice sessions. If you need help joining, don't hesitate to call me at **314-307-0692!**

Due to COVID-19, **all outreach activities for March and April have been cancelled** and will likely be cancelled through June 1st as well. We will see what the status is as time moves forward. When in doubt, consult the calendar for updates in real time as we are updating the calendar on

a regular basis.

The status of the MSRAL Convention is up in the air at this writing and has NOT been cancelled. If you are interested in going, I would recommend making a reservation at the hotel and NOT registering for the conference until we can determine if it may be held. The dates are June 12-14. I suggest you **call** the Crowne Hotel for the room and mention MSRAL for the discounted rate. The link for MSRAL information is on the SLAS home page, at www.msral.org, or at this direct link: <https://msral2020.wixsite.com/register4msral2020> The schedule and other events have been set. Hopefully we will get to meet!

We will also be holding the SLAS Board meetings via Zoom conference, especially since at this writing, restaurants will be closing down for the near future.

The best advice I can give you at this point is to be safe, look out for others, and do what you can to get by. By all means, take a scope out and try to do some observing at home when you can! I will also be working on some projects related to astronomy to be ready once we are past all of this and back to a semi-normal existence. It's a good time to organize and get caught up on some of that work you've been putting off.

I will also be looking into holding regular Zoom conferences so people can simply get together while we are all in this situation.

Hope to see you soon!

Jim Small



Top left: Mark Jones demonstrates a scale model of the Earth-Moon system for outreach

Top right: Grant Martin explains his very complex electronic focuser system which he subsequently replace with a stick! (Ask Grant)

Far left: Braving the cold to observe the phase of Venus at Parkway North High School

Left: Ray Mueller explains electromagnetism to students at LaSalle Springs Middle School



Far Left: Dr. Ryan Watkins of the Planetary Institute speaking about missions to other planets in January. **Left:** Mark Jones with astronomy events for 2020. **Above:** Dr. Watkins gets mugged by Brad Waller! **Below left:** Event at Girl Scouts of Easter Missouri Astronomy Club.



Above: Group observing the Moon at the Jefferson College Observatory event. They are looking at Don Ficken's 13 Inch Coultter. **Left:** SLAS members Bruce Boston, Mark Jones, Larry Campbell, Brent Buch, John Sullivan and Rich Heuermann receive Membership Recognition Awards



Left and right top:

Mike Malolepszy describes methods for using radio telescopes as an interferometer.

Right middle:

Jim Small presents Mike Malolepszy a plaque commemorating his many years of service as Star Party Coordinator for SLAS

Right bottom: Mike Malolepszy gets "mugged" by Brad Waller

Left middle and bottom:

Carl Masthay speaks about Chinese characters and words that describe the phases of the Moon

Bottom:

Recipients of the Night Sky Network outreach awards.

In the back row:

From left: Mark Jones, Jim Small, Sharon Bertram, Rita Breeden, Bill Breeden, Cook Feldman, Rick Menendez, Don Ficken, John Beaury, and Rich Heuermann.

In the front row:

From left: Larry Campbell and Bradley Waller.





Top: Finding meteor rights and meteor wrongs in the sand at LaSalle Springs Middle School with Mark Jones.
Above left: Checking out M42 at the Jefferson College Observatory. Venus is in the background
Above right: The Moon is very bright in the background with Mark's 17" dob in the foreground.
Right: Audience in the February meeting at McDonnell Hall.

SLAS Executive Board Minutes February 6, 2020

1. Opening Activities a. Attendance: Jim Small, Brent Buch, Brad Waller, Tom Nickelson, John Newcomer, Mark Jones b. Open Meeting: meet opened 7:00pm c. Approval of last month's meeting minutes: Motion to approve minutes by John, second by Tom. Minutes approved by Board d. Next Board meeting dates for 2020: Mar 5, Apr 2, May 7, Jun 4, Jul 2, Aug 6, Sep 3, Oct 1, Nov 5, Dec 3

2. Upcoming General Membership meeting topics:

a. Speaker: K Michael Malolepszy-Probing the Sub-Microwave Universe Part II-SLAS b. Speaker Press Release: not out as of the board meeting c. Special Awards to be presented: Anniversary Awards, NSN awards, Plaque to Michael M d. Special Business needed; Possible presentation on new recognition program e. A101: Carl Masthay presentation on Chinese names for Moon phases]

3. SLAS Financial Report a. Balance Sheet no expenditures logged during Jan. \$751 income reported. Treasurer reported that SLAS-owned laptop is outdated and will be retired. Treasurer is using personal laptop for SLAS business. Treasurer reported that Observatory property insured through 2020. Renewals of magazine subscriptions is getting to be a real problem. Astronomy and S&T magazines publishers don't handle 3rd party renewals very well. Bill will propose changes to renewal process at next month's Board meeting. b. Profit/Loss report – Net income for January was \$477 c. Annual Budget meetings – Will start in September d. Corporate filings

4. Speaker Committee a. 2020 Budget - \$500 b. Upcoming speakers: March- Joseph N Marcus, April-Raymond E Arvidson, PhD, May-William McKinnon, PhD, June-Vayujeet Gokhale, July-Amy E Kimball, PhD, August-Jeffrey Gillis-Davis, PhD, September-Anne Hofmeister, PhD, October-Marco Cavaglia, PhD, November-Brett McGuire, PhD, December- Maura McLaughlin, PhD c. Open dates: John Newcomer July 2021 Apollo 15 anniv. Topics of interest – submit topics to Brad Stipends – nothing to report this month d. Travel – nothing to report this month

5. Membership Initiatives a. 2020 Budget - \$400

b. Welcome Aboard Meetings
c. Raffles– nothing to report this month
d. Attendance prizes – Next event will be March equinox, then solstice,

6. Membership Recognition a. 2020 Budget - \$900 b. NSN Outreach Awards - \$100 budget, spent \$44 on pins c. Membership report: 179 members which is a reduction of three members from the start of year. Don received six renewals in the last two days so this should help our numbers for February 2020.

d. Member anniversary awards will be presented at February meeting

e. 2020 Budget for New Award program - \$600
-New Award Committee report- Larry chairman
-New Award Policy and nomination process
-Nominations open Dec 1st
-Nomination submittal deadline May 1st
-Nomination reviews to be complete by Aug 1st
-Award selection by Aug 1st
-Plaques purchased
-Awards presented at September meeting

7. Outreach a. 2020 Budget - \$1000

a. Member Training Program Status, see Marks email from 11-17-2019 and provide comments
-Familiarize members which SLAS outreach tools like globes, etc
-Topics include: Liabilities, diversity and conduct. What to do in

case of emergencies, and special Host policies
-Purchase of T-shirts for volunteers completed training
-Take training quiz
-Go to 2 or more events needed qualify
-Mentors will qualify but must take the quiz
- Purchase of Francis Park lawn signs – Design completed by Brad and John. Artwork is B&W. Brad will placed order next month,
- Upcoming outreach events. There is an average of 12-14 events per month for next three months
- Awards/recognitions – See meeting notes above, pins received \$44 for 25 total, 3 free, 22 extra ordered @ \$2 each
- NSN Outreach hours YTD

8. Old Business: a. Training Program need to start a committee b. Star Party request policy - Policy will not change but some strategies are to be implemented: 1. Send St Charles events to ASEM, Alton area send requests to Riverbend, Belleville area send to Rich Fefferman. Franklin county requests send to EMDSO. Jim will make pages for all local observatories to promote viewing opportunities throughout the region.

9. New Business and topics for discussion: January meeting was a live broadcast on Zoom. Live Zoom is easy to do at Washington U but you need an HD quality webcam. Should we consider doing that more often? Jim will talk to Don about using Zoom again. If we use more Zoom meetings, how do we conduct business like voting or door prizes for those attending remotely?

10. Other Committee Reports: If needed

a. SLSC Business: -First Friday actions Mighty Duck theme, indoor only due to weather forecast -Other immediate business

b. SLCL Business: -Annual contract -Upcoming events

c. Jefferson College Business: -Committee Meeting report new architect drawing distributed and SLAS webpage has been updated -Upcoming Outreach Event

d. Library Telescope Committee -2020 Budget – \$650
-Upcoming builds or maintenance events – Next build Feb 29th -
-Maintenance budget - \$200. Feb 29th is next maintenance day.
-Mileage re-imbursement - \$250 -Promotional materials - \$200

e. SLAS Social Events -2020 Budget - \$300
-Homemade Fest - \$100 budget, date and venue Feb 22, 4-11, -
Kirkwood Community Center Prizes?

-Timeline: doors open 4pm, eat at 5:30. -Presentation: 6:00 Brad is MC and will get door prizes -Jim bringing computer, projector. -Jim will have Kirkwood provide the screen. -Brad to send Email blast via NSN and ask for RSVPs.

-Star-B-Q – 2020 budget - \$200, date and venue Other

SLAS Brochures -2020 Budget \$325

-2019 Quarter cards 4000 have been delivered.

Loaner scope Program -2020 Budget - \$100

-New donations Shed status -Items for sale

SLAS Library -2020 Budget - \$400

-Celestial sphere \$300 budget -Other \$100 budget -Annals of the Deep Sky Survey of Galactic and Extragalactic Objects - \$21.95

Merchandise

Telescope Making

Newsletter

Website – Web hosting fee has been paid \$179.40 for 2020

Social Networking

Night Sky Network Pins received.

SLASdialogs

Dark Site

Loaner Scopes

Observing Programs

Star Parties

Closing Activities

Motion to adjourn made by Brad and seconded by Brent. Meeting adjourned at 9:02

St. Louis Astronomical Society Profit & Loss Budget vs. Actual January through February 2020				St. Louis Astronomical Society Balance Sheet As of February 29, 2020		
	Jan - Feb 20	Budget	\$ Over Bud...		Dec 31, 19	Feb 29, 20
Ordinary Income/Expense				ASSETS		
Income				Current Assets		
Magazine Subscription	534.55	405.15	129.40	Checking/Savings		
Membership Dues	1,070.00	745.00	325.00	Checking - First Bank	7,187.45	8,132.94
Total Income	1,604.55	1,150.15	454.40	Deposit, Certificate of	15,841.67	15,883.97
Cost of Goods Sold				Library Telescope Escrow	1,053.86	562.55
Magazine Subscriptions	534.55	338.20	196.35	PayPal	77.94	151.33
Total COGS	534.55	338.20	196.35	Savings - First Bank	41,122.69	41,134.62
Gross Profit	1,070.00	811.95	258.05	YMCA Trout Lodge Escr...	14.21	14.21
Expense				Total Checking/Savings	65,297.82	65,879.62
1-Programs & Events	75.00	1,267.00	(1,192.00)	Other Current Assets		
2-Newsletter		110.00	(110.00)	Inventory Asset	761.53	761.53
3-Library expense	21.95	83.33	(61.38)	Undeposited Funds	20.00	20.00
5-Loaner Scopes		16.00	(16.00)	Total Other Current Assets	781.53	781.53
6-Brochures		100.00	(100.00)	Total Current Assets	66,079.35	66,661.15
8-Website	179.40	60.00	119.40	Fixed Assets	15,000.00	15,224.00
9-Administrative Expen...	74.81	70.00	4.81	TOTAL ASSETS	81,079.35	81,885.15
Total Expense	351.16	1,706.33	(1,355.17)	LIABILITIES & EQUITY		
Net Ordinary Income	718.84	(894.38)	1,613.22	Equity		
Other Income/Expense				Opening Bal Equity	8,497.66	8,497.66
Other Income				Retained Earnings	69,757.14	72,581.69
Donations	2.05		2.05	Net Income	2,824.55	805.80
Interest Income	54.23	33.00	21.23	Total Equity	81,079.35	81,885.15
LTP Receipts	1,307.95		1,307.95	TOTAL LIABILITIES & EQUITY	81,079.35	81,885.15
Proceeds from Lens Sales	521.99		521.99			
Total Other Income	1,886.22	33.00	1,853.22			
Other Expense						
LTP Disbursements	1,799.26		1,799.26			
Total Other Expense	1,799.26		1,799.26			
Net Other Income	86.96	33.00	53.96			
Net Income	805.80	(861.38)	1,667.18			

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 astro photos? Please submit!**
- 3. Bought something or built something? How about a review or an article!**

Send to newsletter@slasonline.org

SLAS EVENTS

Upcoming Star Parties and Other Events

For details on these and other upcoming events, check out the Night Sky Network Calendar linked on the Home Page for SLAS at <http://www.slasonline.org>

SLAS Executive Board Meetings *Location will be at Nicoletti's Restaurant in Valley Park* All meetings are on First Thursdays unless noted. **Note: Board meetings will be via Zoom until further notice.**
Apr 2, May 7, June 4, July 2, Aug 7, Sept 3, Oct 1, Nov 5, Dec 3

Dark Sky Observing Dates
Mar 21

Francis Park Events: These events are on Wednesdays of the week nearest the first quarter Moon
May 27, Jun 24, July 29, Aug 26, Sept 23, Oct 21

Sky Orienteering Events For members who want to gather and do some relaxed observing at Babler State Park

Please RSVP if you plan to come!

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month
Planetarium shows start at 7pm May 1, Jun 5, July 3, Aug 7, Sept 4, Oct 2, Nov 6, Dec 4

Pattonville Observatory Public Viewing Dates
Cancelled until further notice

Broemmelsiek Astronomy Park Public Viewing
Cancelled until further notice

UMSL Observatory
For directions and map
<http://www.umsi.edu/~physics/About%20the%20Department/astro.html>

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

Skywatch Hotline: 314-516-5706

Saturdays:

March

20 Fri Carondelet Leadership
20 Fri SLAS Regular Meeting (Zoom)
21 Sat Solar Saturday (cancelled)
21 Sat SLAS Dark Sky Observing
24 Tue Oak Bend Library (cancelled)
25 Wed Bridgeton Trails Library (cancelled)
26 Thur Samuel Sachs Library (cancelled)
30 Mon Grants View Library (cancelled)
31 Tue Grand Glaize Library (cancelled)
31 Tue STLCO HQ Library (cancelled)

April

1 Wed Francis Park Stargazing (cancelled)
2 Thur Armstrong Elementary (cancelled)
2 Thur SLAS Board Meeting (Zoom)
3 Fri SLSC Public Telescope Viewing
(cancelled)
5 Sun Jefferson College Observatory
(cancelled)
9 Thur Premier Charter School (cancelled)
17 Fri Twin Chimneys Elementary
(cancelled)
17 Fri SLAS Regular Meeting (Zoom)
18 Sat Solar Saturday (cancelled)
18 Sat SLAS Dark Sky Observing
19 Sun SLAS Sky Orienteering (cancelled)
22 Wed Wild Horse Elementary (cancelled)
27 Mon Natural Bridge Library (cancelled)
28 Tue Lewis and Clark Library (cancelled)
29 Wed Francis Park Stargazing (cancelled)

LET US KNOW YOU ARE COMING!

To RSVP for any of these events log in to the Night Sky Network and submit your RSVP. If the event is canceled, you will be notified immediately according to the preferences you have selected.

SLAS Merchandise Available

SLAS merchandise is now set up for embroidery at **Headz n Threadz** at <https://hnt.threadthis.com/>

There are two locations:

Galleria: 2495 St. Louis Galleria, St. Louis, MO 63117 Telephone: 314.862.2695
galleria@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 Infini-tees



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 @ \$32.95 / 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)	636-357-2763
treasurer at slasonline.org		
Hospitality	Larry Campbell	636-244-2867
hospitality at slasonline.org		
Board Members at Large:		
	Tom Nickelson	314-346-9565
board20 at slasonline.org		
	Brent Buch	314-239-0329
board21 at slasonline.org		
	John Newcomer	314-496-4636
board22 at slasonline.org		
ALCOR	Bill Winningham	636-357-2763
(Astronomical League Correspondent) treasurer at slasonline.org		
MSRAL Rep.	Jim Small	314-909-7211
msral_rep at astroleague.org		

COMMITTEE CHAIRS

Dark Site Coordinator	Mark Jones	636-394-2342
darksite at slasonline.org		
Librarian	Jim Small	314-909-7211
librarian at slasonline.org		
Library Telescope Program	Don Ficken	636-851-9630
librarytelescope at slasonline.org		
Loaner Equipment	Greg Gaines	314-277-3082
loaner at slasonline.org		
Merchandise	Vacant	
merchandise at slasonline.org		
Membership	Don Ficken	636-225-0269
membership at slasonline.org		
Newsletter Editor	Jim Small	314-909-7211
newsletter at slasonline.org		
Observing Programs	Mark Jones	636-394-2342
observing at slasonline.org		
Publicity	Rich Heuermann	314-962-9231
publicity at slasonline.org		
Recognition	Larry Campbell	636-244-2867
recognition at slasonline.org		
Social Media	Vacant	
'SLASdialogs' Moderator Mark Jones, Rhonda Whelan		
dialogsmoderator at yahoo.com		
Star Party Coordinator	Bill Breden	314-276-3613
starparty at slasonline.org		
Telescope Making	Bill Davis, Jim Melka	314-469-3061
telescope at slasonline.org		
Webmaster	Jim Small	314-909-7211
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>

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Facebook: @stlastro

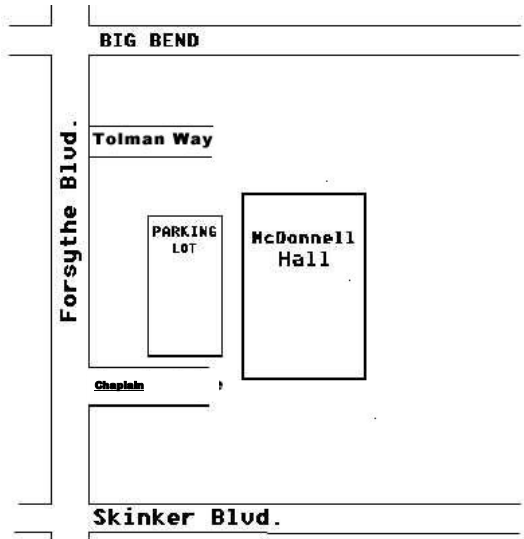


Who We Are and What We Do

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 anyone with an interest in astronomy.

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

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



St. Louis Astronomical Society

Jim Small
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St. Louis, MO 63122

