

THE EVENT HORIZON



ST. LOUIS ASTRONOMICAL SOCIETY

*Devoted to the Interest and Advancement
of the Science of Astronomy*

VOLUME 28, Issue 8
August, 2018

The Apollo Missions, the Far Side of the Moon and Continued Studies from a Distance

by
Anna Schonwald
Washington University

In light of the recent 49th Anniversary of Apollo 11, we will discuss how the Apollo missions reframed our understanding of the Moon and how this research continues with lunar orbiters. Before stepping foot on the Moon, man's knowledge of our neighbor came from remote sensing. Photometry, or the science of the measurement of light, has been used for about 2,000 years by astronomers. The dark patches on the near side of the Moon were named "mare" or sea based on differences in reflected light.

During the Apollo program we landed six missions on the lunar surface and found an ancient, lifeless world that was genetically related to Earth but with virtually no water. Despite traversing only 60mi (97km) of the Moon's 2160mi (3475km) diameter, the discoveries made from the Apollo missions greatly enhanced our knowledge of the entire Moon, including the far side. These discoveries led to the "Giant Impact" theory and the Lunar Magma Ocean (LMO) hypothesis.

What about today? Though humanity's last footprint on another planetary body was 45 years ago, the discoveries from the Apollo

missions continue to inform modern lunar research. We can relate results from photometric studies of the far side to the Apollo sites as a way to ground-truth our data. By comparing data from the far side of the moon to areas where we have detailed information about the geology from samples and data, we have a better way to test our inferences. What can we do from a distance? The answer is quite a lot!

Anna Schonwald is a graduate student at Washington University. She is currently studying the ancient crust of the moon using NASA's Lunar Reconnaissance Orbiter Cameras (LROC). She earned a degree in physics and geology from Earlham College, where she helped restore the campus observatory in order to hold public observation nights. Ms. Schonwald also conducted research in New Mexico at the National Radio Astronomy Observatory (NRAO) on the atmospheric circulation of the planet Uranus.

Upcoming Meetings: 2018

September Francesc Ferrer, PhD, Washington U.

In the wake of the Higgs, what will the next breakthrough at the LHC?

October Mao Xiaochen Washington University The Dawn Mission: Vesta and Ceres

November Bard Joliff, PhD Washington University Lunar Geology

December Pamela Gay, PhD ASP
Secret Squirrel Part 2

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Don Ficken Awarded Prestigious Las Cumbres Amateur Outreach Award from the Astronomical Society of the Pacific

Our own Don Ficken has been awarded the Las Cumbres Amateur Outreach Award by the ASP. The award will be presented at their annual banquet in November. Don is recognized for his work with the library telescope program and the eclipse task force. Be sure to congratulate him the next time you see him. The press release put out by the ASP is on the next page.



Presidents Corner

by

Jim Small

Congratulations to Don Ficken on the Las Cumbres Amateur Outreach Award given by the Astronomical Society of the Pacific. This is a tremendous national award given out every other year. I can think of no one more deserving than Don for this award. Without his leadership, the Library Telescope program would not be here and the eclipse efforts would not have taken place in this area. He was instrumental in both endeavors and had an effect nationally in both regards. He is continuing on now with the efforts to take the Library Telescope program national and locally with the efforts to establish an observatory at Jefferson College.

The opening event at Jefferson College was outstanding with around 200 people attending. Of course I was always facing the wrong direction whenever a good meteor happened! I did manage to see one terrific fireball before the night was up.

School is back in session as of Monday, so be prepared to help out with numerous star parties this month as educators get back in the swing. Pattonville Observatory is back on line the last two Fridays of this month and twice a month after that. EMDSO is hosting star parties at East Central College on third Saturdays including this Saturday and ASEM does their usual Friday night events at Bromellseik.

Need something to find in the sky? Mark Jones will have his A 101 tonight with events for the upcoming quarter.

I will continue to enjoy Mars while it's bright and try to get some observations in between classes I'm teaching and the class I'm taking this semester.

Sorry for the clouds earlier in the month. They of course were the result of upgrading to a used 9.25 Edge HD SCT I picked up to replace my older C8. It has been terrific so far and it's a really good fit for my mounts. It would have been great to pick up a C11, but it's too much for the mounts that I have. Looking forward to many nights with the 9.25! Maybe even do some imaging..... (of course, you'll never see the photos even if I do..... lol)

Las Cumbres Amateur Outreach Award

Established by Wayne Rosing and Dorothy Largay, the **Las Cumbres Amateur Outreach Award** honors outstanding educational outreach by an amateur astronomer to K-12 children and the interested lay public. The 2018 recipient is **Don Ficken**, a member of the St. Louis Astronomical Society who has performed remarkable services in expanding the outreach programs of the society.

Since 2014, Ficken has developed and managed the SLAS Library Telescope program which now circulates 135 telescopes through libraries in eastern Missouri and western Illinois in addition to another five telescopes made available to local pre-college educators. Ficken also expanded the educators' telescope program to include 13 Sun Spotter telescopes, dedicated to solar viewing, used by library branches for eclipse programs during the summer of 2017. In 2018 Ficken joined an Astronomical Society of the Pacific committee to develop a nationwide Library Telescope Program.

In addition he founded the St. Louis Eclipse 2017 Task Force which worked three years to prepare the St. Louis metro area for the historic 2017 Total Solar Eclipse. Ficken delivered more than 200 presentations in the St. Louis area and grew the task force to more than 300 representatives from schools, science museums, local and state agencies, businesses, libraries, universities, astronomy clubs, and civic groups in central and eastern Missouri and western Illinois. Ficken also produced the June 19, 2017 Saint Louis Solar Eclipse Expo attended by over 4,000 people which included the procurement and distribution of over 160,000 solar eclipse-viewing glasses at no cost to pre-college students and their educators. Ficken subsequently coordinated the collection of over 23,000 used solar viewing glasses for use by schools in South America located in the path of the 2019 solar eclipse.

Highly regarded by his peers in both professional and amateur public outreach, Ficken's passion for astronomy and space represents the very best practices in amateur STEM education. In praise of his work, one of his nominators said, "*Don's efforts for the expo not only touched the lives of the visitors that day, but it also inspired and enabled other groups to do their own major eclipse outreach efforts.*"



Don Ficken

16th Annual SLAS Star-B-Q

Saturday, September 29, 2018

Walnut Grove Picnic area

Come join fellow members of SLAS at Babler State Park for a day of food, softball, games, and observing. SLAS will once again provide the Bar-B-Q. We ask is for you to bring your favorite drinks and side dish or dessert. ***This area has a large shelter, restrooms, and baseball fields. There is also plenty of room to set up volleyball or horseshoes if you wish to bring them. We will observe from the ball fields.*** Don't have a telescope? Don't worry this is a great chance to see other member's telescopes.

Remember: Members should bring a drinks and a favorite side dish or dessert.
Don't forget to bring your telescope or binoculars, chairs and bug spray!

Schedule of Events

2pm Setup

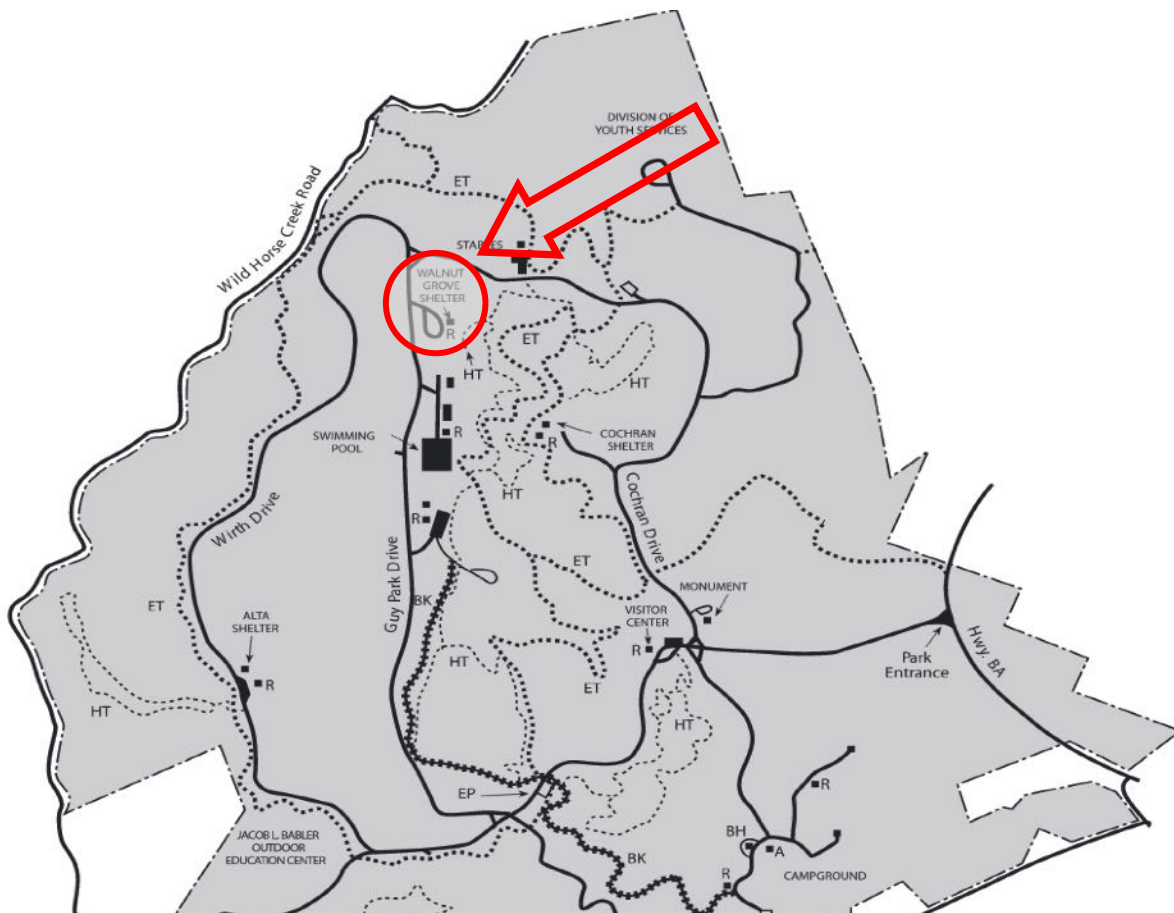
3pm – Picnic begins

4pm-6pm Food line open

6pm-7pm Trivia Contest (with prizes)

6:50pm Sunset

7:30pm- Midnight Observing at picnic site



Stargazing at Jefferson College a Success

by Don Ficken

We had a terrific evening of stargazing Saturday night at Jefferson College. About 200 visitors attended with a good number traveling from St. Louis and from as far away as Edwardsville. Visitors starting arriving around 7:30 pm with the last leaving just after 2am.

Nine staff/volunteers from Jefferson College and the St. Louis Astronomical Society setup 14 telescopes for public viewing with several large telescopes present (including one with 17.5 inches and another with 12 inches of aperture). Although there was a haze in the sky with heavy dew setting in around midnight, visitors were able to see impressive views of Saturn, Jupiter and Mars along with some spectacular views of deep sky objects such as clusters and nebulae. Many said it was their first time to look through a telescope. They were very excited and asked when the next viewing was planned.

A number of participants took our advice and used lawn chairs and blankets to watch for meteors. Shrieks of excitement were heard when a fireball was seen streaking across the sky.

A photographer from the Leader was present and talked to several of the attendees.

We did get reports of confusion about the viewing location. Apparently the Leader referred visitors to the "soccer field" in an article about the event. Several visitors expressed frustration that it was difficult to find the viewing area. They reported seeing several cars of visitors near the main entrance appearing to leave after seeing an empty soccer field.

Particularly with the late start of organizing the event, I believe this event shows promise that the Jefferson College campus can draw public from Jefferson County and the

regional St. Louis area.

Many thanks to Jefferson College for hosting the event, to Bob Brazzle and Maryanne Angliongto for arranging the hosting details and to the board of the St. Louis Astronomical Society for agreeing to support the event. A personal thank you to Roger Barrentine and Rich Heuermann for promoting the event and to the many volunteers from the St. Louis Astronomical Society who brought their telescopes for a great evening of fun.

Thank you!

Don_Ficken



Top: People set up for watching meteors.

Above: The line to look at M13 in Don's 17" Coulter



Clockwise from Top Left:

Jackie Beucher with the John Dobson scope. It is now with the Kansas City club. Mark Jones and Rich Heuermann at the special celebration for the Apollo 11 landing at the Science Center. Sharon Bertram explaining Library Telescopes. The set up at the Apollo 11 celebration.

For Sale: New Moon 12" F4 Hybrid Dob – Fast. Rigid and Light

Or sale locally before I put it on the buy/sell boards

New Moon Hybrid dob, 12" F4, GSO optics. One of the best new custom dob makers around, New Moon scopes are made to be light yet rigid. This scope weighs only around 50# total. Solid walnut/ash furniture-like construction with a superb finish with rigid box joints. Designed to carry, without re-balancing often, anything from an Ethos 21mm to a small Plossl. See New Moon's web site for further details, www.newmoontelescopes.com.

Features and includes: 12"F4, GSO optics

Collapsible truss system

3-vane curved spider

Custom shroud

Dual speed Moonlite focuser

Foldable wheelbarrow handles

SS hardware

24" crescent aluminum gen3 bearings

Dual boundary layer fans

Ultra-light 6-point flotation mirror cell

10K encoders/hardware for DSC's

Custom detachable tablet stalk/aluminum base/wood top

Rigel and Telrad finder bases (finder not included)

Sliding counterweight system

Kendrick Secondary dew heater.

Based on its configuration, at current New Moon pricing if ordered today it would be around \$4800 or so, with a 4 to 6 month wait. Asking \$3600. Call or text Lou Laderman, 314-308-4363, or email at lladerman@earthlink.net



**Pick up
Recognition
Pins at the
Meeting!**

If you haven't picked up your pins, please get them at the meeting!

5 year pins

Bill Biermann
Doug Blum
Gaylene Engelbrecht
Dale Engelbrecht
Richard Fefferman
Loribeth Jarrell
Charles Jeffreys
John King
Andrew Kniffin
Joe Marcus
Raymond Mueller
William Neubert
Tom Nickelson
Alan Sapia
David Scrivner
Bryan Siegfried

10 year pins

Bill Breeden
Rita Breeden
Daniel Corso
John Duchek
Greg Gaines
Randy Gibbs
Brad Griffith
Dan Howard
Brian Mills
Colleen O'Toole
John Schwartz
Jim Twellman
Phyllis Weber

15 year pins

John Follis
Linda Follis
Tom Keutzer
Jerry Loethen
Karen Loethen
Joe McHugh
Gary Mockli
Terry Nicklotsky
Jim Roe
Yvonne Roe
Greg Ruppel
Rodney Rynearson

James Wells

20 year pins

Paul Baldwin
Marvin Fridley
Lisa Holderle

25 Year pins

Steve Sands
Allan Stewart

30 year pins

Thomas Ryan
Dr. Henry Stratmann Jr.
Gail Todd

Thomas Kuehling
for **35 years**

James Timper for
35 years

Lawrence Doecke
for **40 years**

Jim Melke for **60 years**



Top: Shanna Ramirez at Apollo 11 Day.
Middle: In line to view Venus through the Breeden's SCT.
Left: Mars and Moon cakes at the July meeting!

SLAS Executive Board Meeting Minutes July 5, 2018

1. Opening Activities: Attending: Mark Jones, Brent Buch, Larry Campbell, Jim Small, Brad Waller, Rich Heuermann
Meeting called to order 6:48 Draft of the June SLAS meeting minutes were distributed before the meeting. Brad made motion to approve and second by Rich. Minutes were approved by Board.

2. External Business Next board meeting: August 2, Sept 6, Oct 4, Nov 1, Dec 6 Board meetings will be held at Nicoletti's Restaurant in Valley Park until further notice.

MSRAL 2018 Went very well, at least 14 SLAS members attended. **ALCON 2018** will be in Minneapolis July 11-14

3. Director Reports:

President – Jim Small: Jim will be going to Alcon next week

Vice President: Bradley R Waller Brochure- Drafts of new SLAS brochure in post-card format were presented by Brad. Artwork was produced by John Newcomer. Board preferred the portrait format over the landscape format. Suggestions were to add URL addresses below QR code; add "at the McDonnell Planetarium" to the monthly meeting sentence. Brad and John Newcomer will make updates and send Board new Portrait version. Targeting a printing of 4000 pcs. Price breakdown as follows: 2000 @ \$175.75, 3000@\$263.13, 4000@\$270, 5000@\$345

Bob "Astro Bob" King – Possible SLAS speaker, Jim Small will talk to him at ALCON

SLAS Monthly Meetings

Presentations 2018

Month	Name	Topic	Sponsor
20-Jul-2018	Tyler Frost	Returning Americans to Space: CST-100	Boeing
17-Aug-2018	Anna Schonwald	The Apollo Missions: The Farside of the Moon & Continued Studies From a Distance	Wash U
21-Sep-2018	Francesc Ferrer, PhD	In the wake of the Higgs, what will the next breakthrough at the LHC?	Wash U
19-Oct-2018	Mao Xiaochen	The Dawn Mission: Vesta and Ceres	Wash U
16-Nov-2018	Brad Jolliff, PhD	Lunar Geology	Wash U
21-Dec-2018	Pamela Gay, PhD	Super-Secret Squirrel Stuff...Again :)	ASP: Astronomical Society of the Pacific

Presentations 2019

Month	Name	Topic	Sponsor
18-Jan-2019	Erika Gibb, PhD	Comets	UMSL
15-Feb-2019	K Michael Malolepszy	The Year in Planetary Exploration	SLAS
15-Mar-2019	Bruce Stinchcomb, PhD	Meteorites	Flo-Valley
19-Apr-2019	Possible Bob "Astro Bob" King		
19-Jul-2019	Ryan Clegg-Watkins, PhD	Exploring the Moon from Orbit: Paving the Way for Future Astronaut Explorers	Wash U
20-Sep-2019	Don Hampton, PhD **	Aurora Borealis & Steve	UAF
15-Nov-2019	Claire Chandler, PhD **	Super-Earths and the Formation of the Solar System	NRAO
20-Dec-2019	Duncan Lorimer, PhD **	Fast Radio Bursts: "Lorimer Bursts"	UWVA

**Skype Event -NRAO: National Radio Astronomy Observatory -UAF: Univ of Alaska: Fairbanks -UWVA: Univ of West Virginia

***Astro 101:** No A101 planned for July meeting. Attendance prizes will be given out

Secretary – Mark Jones: SLAS orienteering will be held July 9th SLAS Star-B-Q scheduled for Sept 29, 2018. Mark to send Star-B-Q announcement to Jim for newsletter SLSC Sci-Fi Saturday July 21 "One Giant Leap". We will have in-door display tables from 9:30 to 5:30 in the main SLSC and solar viewing outside the Planetarium entrance

Treasurer/ALCor – Bill Winingham: Reports sent before meeting. Net income \$4600 over budget Larry C. requests that budget reports include itemized list so that each committee can tell what their balance.

Hospitality – Larry Campbell: Larry will have 8" Moon cake and 8" Mars cake made for July meeting

Membership recognition – Larry will send list of certificates that need to be distributed to members

Board member at large reports

Rich Heuermann (2019) No report

Tom Nickelson: (2020) No report

Brent Buch (2021) Don helped install "All Video Player Pro" so that meeting videos can be played from SLAS website. Still working on details before videos will be ready to upload.

4. Committee Reports: If needed

Library Telescope Program: Next telescope build scheduled for July 28th. Plan is to build 10 telescopes.

Membership – We have 178 members which is three members below last month (181) and seven members below the beginning of the year (185). However, our member count is 15 members over last year at this time.

Merchandise – New SLAS mugs have arrived total number of mugs was 76.

Newsletter – Articles and pictures (especially pictures) are welcome to beef up the newsletter and our social media outlets. Please forward to newsletter@slasonline.org Discussion about redesign of brochure and what to do with them.

Website Assigning duties for website, apply SSL certificate (about \$36) to website to improve security for site. Don will implement in Joomla. This will enhance the safety of our website considerably and the funding will come out of website budget.

Motion by Jim S – "I move that SLAS pay for SSL certificate to make SLAS site more secure, estimated cost is \$35". Second by Larry. Motion approved by Board.

Social Networking – Public Facebook page continuing to attract new followers.

Night Sky Network – Rich Heuermann will be added as a NSN Coordinator

Loaner Scopes – Another scope donation received

Publicity – Press release for July meeting has been sent out.

Star Parties– See report for list. All but 2 events have a SLAS lead person identified. Check NSN for upcoming events

5. Old Business Motion was tabled at June and again at the July meeting. Waiting for Treasurer's review of current budget

"I propose that SLAS invest with member approval \$166 +Shipping (about \$16.17) to purchase a second table cover and new Banner for use at outreach events (OR \$144 each plus 16.17 shipping for two covers and banners). Multiple events on the same day deems it necessary to have duplicate materials."

6. New Business None

7. Closing Activities Motion to adjourn by Brad and second by Brent. Motion approved by Board. Meeting adjourned at 8:45pm

7:35 PM
08/12/18
Accrual Basis

**St. Louis Astronomical Society
Profit & Loss Budget vs. Actual
January through July 2018**

	Jan - Jul 18	Budget	\$ Over Budget
Ordinary Income/Expense			
Income			
Total Magazine Subscription	973.80	1,071.60	(97.80)
Membership Dues	2,330.00	2,765.00	(435.00)
Total Income	3,303.80	3,836.60	(532.80)
Cost of Goods Sold			
Total Magazine Subscriptions	962.50	1,071.60	(109.10)
Total Merchandise	(85.92)	45.00	(130.92)
Total COGS	876.58	1,116.60	(240.02)
Gross Profit	2,427.22	2,720.00	(292.78)
Expense			
1-Programs & Events	1,069.30	1,262.00	(192.70)
2-Newsletter	130.00	102.00	28.00
3-Library expense	248.40	175.00	73.40
4-Astronomical League Dues	825.00	760.00	65.00
5-Loaner Scopes		600.00	(600.00)
7-Insurance	825.00	825.00	
8-Website	228.40	170.00	58.40
9-Administrative Expenses	69.54	993.00	(923.46)
Total Expense	3,395.64	4,887.00	(1,491.36)
Net Ordinary Income	(968.42)	(2,167.00)	1,198.58
Other Income/Expense			
Other Income			
Donations	1,329.50	0.00	1,329.50
Interest Income	53.87	59.00	(5.13)
LTP Receipts	2,165.98	0.00	2,165.98
Proceeds from Lens Sales	1,803.29	0.00	1,803.29
Total Other Income	5,352.64	59.00	5,293.64
Other Expense			
LTP Disbursements	1,356.93	0.00	1,356.93
LTP Escrow Funding	500.00	500.00	
Total Other Expense	1,856.93	500.00	1,356.93
Net Other Income	3,495.71	(441.00)	3,936.71
Net Income	2,527.29	(2,608.00)	5,135.29

**St. Louis Astronomical Society
Balance Sheet
As of July 31, 2018**

	Dec 31, 17	Jul 31, 18
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	5,162.74	6,746.06
Deposit, Certificate of	20,188.79	20,208.91
Library Telescope Escrow	299.98	718.04
PayPal	563.55	799.67
Savings - First Bank	46,297.03	46,330.78
YMCA Trout Lodge Escrow	482.87	482.87
Total Checking/Savings	72,994.96	75,286.33
Other Current Assets		
Inventory Asset	511.28	597.20
Undeposited Funds	50.00	200.00
Total Other Current Assets	561.28	797.20
Total Current Assets	73,556.24	76,083.53
Total Fixed Assets	0.00	0.00
TOTAL ASSETS	73,556.24	76,083.53
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,137.66	8,137.66
Retained Earnings	54,813.50	65,418.58
Net Income	10,605.08	2,527.29
Total Equity	73,556.24	76,083.53
TOTAL LIABILITIES & EQUITY	73,556.24	76,083.53

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

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.

2018: Sept 6, Oct 4, Nov 1, Dec 6

Dark Sky Observing Dates

August 11, September 8, October 6, November 3

Francis Park Events: These events are on Wednesdays of the week nearest the first quarter Moon

September 12, October 17

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

8-3, 9-7, 10-5, 11-2, 12-7

Pattonville Observatory Public Viewing Dates

8-24, 8-31, 9-7, 9-28, 10-5, 10-12, 11-9, 11-30, 12-7, 12-14, 1-11, 1-25, 2-8, 2-22, 3-8, 3-22, 4-12, 4-26, 5-10, 5-24

Broemmelsiek Astronomy Park Public Viewing

Every Friday night with ASEM members

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:

SLAS EVENTS

August

17 Fri
18 Sat
20 Mon
21 Tue
25 Sat
29 Wed

SLAS Regular Meeting
Sidewalk Solar Observing
Flora Borealis
Flora Borealis
Stargazing at the Gateway Arch
Rock Road Library

September

6 Thur
7 Fri
8 Sat
10 Mon
12 Wed
12 Wed
13 Thur
13 Thur
15 Sat
15 Sat
17 Mon
19 Wed
20 Thur
20 Thur
21 Fri
22 Sat
25 Tue
29 Sat

SLAS Board Meeting
SLSC Public Telescope Viewing
SLAS Dark Sky Observing
Daniel Boone Library
Francis Park Stargazing
Oak Bend Library
Webster Groves Library
Caseyville Public Library
Sidewalk Solar Observing
Stargazing Crestwood Park
Natural Bridge Library
Samuel Sachs Library
Belleville West Library
Manchester Parks
SLAS Regular Meeting
Stargazing at the Arch
Lewis and Clark Library
SLAS ANNUAL STAR B Q

October

1 Mon
2 Tue
4 Thur
5 Fri
6 Sat
6 Sat
9 Tue

Northwest Branch Jeffco Library
Central Library
SLAS Board Meeting
SLSC Public Telescope Viewing
Girl Scout Camp
SLAS Dark Sky Observing
Eureka Hills Library

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 _____



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 @ \$29.95 / 1 year \$ _____

TOTAL ENCLOSED \$ _____

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

St Louis Astronomical Society

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

Check all that apply:

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

SLAS OFFICERS

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:

Rich Heuermann 314-962-9231
 Board19 at slasonline.org

Brent Buch 314-239-0329
 Board21 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

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 publicity at slasonline.org

Recognition *Larry Campbell* 636-244-2867
 recognition at slasonline.org

Social Media *Michelle Birch* 636-373-1102
 social at slasonline.org

'SLASdialogs' Moderator *Mark Jones, Rhonda Whelan*
 dialogsmoderator at yahoo.com

Star Party Coordinator *Bill Breeden* 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!
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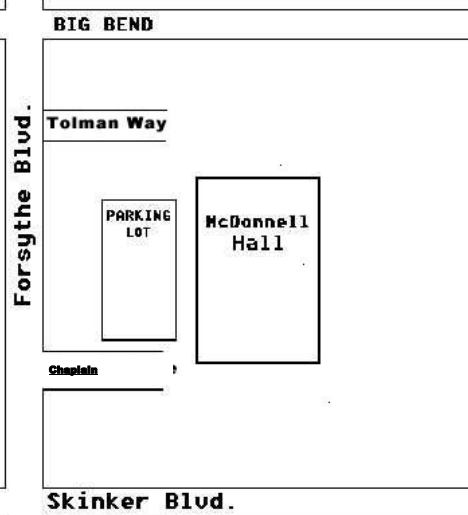


Who We Are and What We Do

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

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

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



St. Louis Astronomical Society

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