THE EVENT HORIZON

ST. LOUIS ASTRONOMICAL SOCIETY

Devoted to the Interest and Advancement of the Science of Astronomy

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Understanding the Dark Universe with the Vera Rubin Observatory

by

Dr. Gautham Narayan
University of Illinois

Dr. Gautham Narayan of the University of Illinois will be featured at the May meeting of the Saint Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, May 17 in Wilson Hall, Room 214

Atop Cerro Pachon, at the southern reach of the Atacama Desert in Chile, scientists and engineers are building the largest machine ever conceived for astrophysics – the Vera Rubin Observatory. Next year, it will begin taking measurements as part of the "Legacy Survey of Space and Time". It will photograph the entire available southern sky every four nights. At the end of its 10-year survey, the Observatory will have resolved 17 billion stars in our Milky Way, discovered 20 billion galaxies beyond the Milky Way, and found 10 million sources that change every night – supernovae, quasars, asteroids, variable stars and probably objects not ever seen before. One of Rubin's key missions is to understand the nature of dark matter and dark energy in our Universe. Astronomer Vera C. Rubin discovered evidence of dark matter in her research of how galaxies rotate. What do we know about "dark matter" and about the mysterious "dark energy" that seems to be pushing galaxies apart from each other at an ever-accelerating rate? Dr. Narayan will discuss the "dark universe" as well as the status of Rubin Observatory, and how the Dark Energy Science Collaboration will use Rubin data to try and answer fundamental questions.

Gautham Narayan has been a professor in the Department of Astronomy at the University of Illinois, Urbana-Champaign since 2019. He previously worked at the National Optical and Infrared Laboratory in Tucson (which runs Rubin Observatory) and at the Space Telescope Science Institute in Baltimore (which runs the Hubble and the James Webb Space Telescopes). He works on melding Artificial Intelligence and Astrophysics, to analyze the massive quantities of data from wide-field surveys.,.

Upcoming meetings:
June: Steven R Gullberg, PhD., Archioastromy; University of Oklahoma
July 2024: Ashley Davies, PhD. "Juno Close Flybys of Io"; JPL
August: Bradley Tsalyuk, Exhibit Developer, Samuel Oschin Air and Space Center, Ca Science Center
October Pamela Gay, PhD, "Secret Squirrel Stuff", Planetary Science Institute
November: Robert Zubrin, PhD. "The Case for Mars"; The Mars Society
December K Michael Malolepszy "Probing the Sub-Microwave Universe, Part III SLAS Member

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Meeting Room Change: Wilson Hall 214! May 17th Meeting will be In Person and Online! The speaker will be IN PERSON!

The meeting will begin at 7:30 PM Friday, May 17 in **Wilson Hall, Room 214**, on the Danforth campus of Washington University, Saint Louis, MO 63105. Wilson Hall is accessible from Forsyth Boulevard via Tolman Way, behind the Somers Family Hall. Free yellow zone and garage parking spaces are available. The event will also be available via Zoom online conference per the link here: **To join with computer or smartphone: use the below link.** https://zoom.us/j/8604505790?omn=91696112100 **meeting ID: 860 450 5790**

If you didn't pick up your NSN Outreach Pin at the meeting in March, you can do so at the May meeting.

MSRAL is coming So are elections THIS MONTH! Nominations are still open

President's Corner
by Jim Small

Registration for MSRAL (June 7-9) is still open. It's too late for the early bird price but here is the direct link: https://msral2024.org/

You can also access the link from the MSRAL home page at msral.org. It is being held in Omaha, NE this year. Hope to see you there!

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

The RASC GA conference was great and was well worth the $20 cost! The AAS meeting is still coming up and they have a virtual component you can attend for $54 membership as an amateur and $104 for the conference.

It also turns out that ASP will have a virtual conference as well. More on that later.

WOW WOW WOW!!!

Please TELL me you got outside to see the Aurora Borealis last weekend! Even my cousins in Alabama could see it! I'm looking forward to seeing photos you might have captured of this unique event at the meeting this month. Bring a thumb drive with photos of Aurora or the Eclipse and we'll take a look!

Personally, I went to Whiteside after the observatory session at Pattonville was over. I didn't get there until near midnight, but the second show started after that and me, Mark Jones and Mike Malolepszy really got a terrific view!

Next month I'll feature photos that are submitted so everyone can take a look in case you missed it! Please send me your favorite Aurora or Eclipse photos along with your name and equipment and settings you used to take the picture and we'll get them posted!

It's star party season and there are plenty of events to choose from as a volunteer. If you aren't going to MSRAL, try to attend one or both days of the air show. Don has some free tickets for volunteers and would love to have several people who could stay the better part of a day. There are plenty of other events too, including Crestwood Park the night of the meeting. So log in, check the calendar and volunteer for one or several events this week.

Hope to see you at the meeting Friday. Remember, we are in Wilson Hall 214 this month.

Sincerely
Jim Small

Astronomy Magazine Sold!
by Bill Winningham

Kalmbach publishing sold Astronomy Magazine a couple of months back. As a result, the Night Sky Network subscription links are no longer working and we are unable to fill subscriptions. We have tried a number of customer service contact methods but have yet to hear back from Astronomy Magazine as to how to process subscriptions and whether the new owner will honor the discounted club subscription rates.

If you requested an Astronomy subscription through SLAS since around March 1 and wish to have your subscription fee refunded, please contact our treasurer. Otherwise your subscription will be processed once the new owners of Astronomy Magazine get the process working again. You will be contacted if it turns out that the group rate will not be honored and additional funds are needed, at which point you can provide additional funds or request a refund.

SLAS Memberships Expiring in May

Kevin	Adkins
Robert	Klein
Eric	Kovach
Don	Mason
Raymond	Mueller
Jay	Paige
Harshard	Parulekar
Elizabeth	Sabetta
Allan	Stewart
Alan	Trodus
Nathan	Vize

SLAS Memberships Expiring in June

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

From the StarBQ Quiz:
Questions for Month #6

6-1. A 4" telescope is using an eyepiece with an 80 degree apparent field of view. The resulting magnification is 200X. You point the telescope at the Full Moon (0.5 degrees in diameter). Will you be able to see the entire Moon's disk thru the eyepiece without moving the telescope? (circle closest answer) (1 point)
yes no no way to tell

6-2. An 25mm eyepiece with a 50 degree apparent field of view and a 12.5mm eyepiece with a 100 degree apparent field are used in the same telescope. Which produces more magnification? (circle closest answer) (1 point)
12.5mm 25mm both see the same no way to tell

6-3. An 25mm eyepiece with a 50 degree apparent field of view and a 12.5mm eyepiece with a 100 degree apparent field are used in the same telescope. Which produces a larger true field of view thru the telescope? (circle closest answer) (1 point)
12.5mm 25mm both see the same no way to tell

6-4. A 3" telescope and a 6" telescope are both using 25mm eyepiece. Which produces more magnification? (circle closest answer) (1 point)
3" 6" both see the same no way to tell

6-5. Two telescopes both have a focal length of 1000mm. Which can see fainter stars? (circle closest answer) (1 point)
the first scope the second scope both see the same no way to tell

++

Answer #6-1: No, actual FOV = 80/200 = 0.4 degrees, the Moon is 0.5 degrees in diameter

Answer #6-2: 12.5mm

Answer #6-3: both see same

Answer #6-4: no way to tell

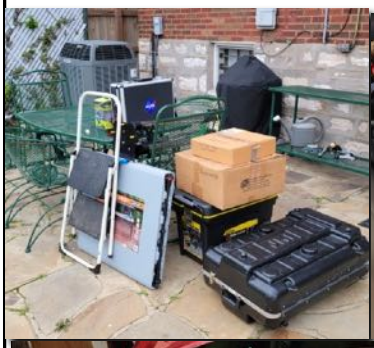
Answer #6-5: no way to tell

Total Solar Eclipse Report
April 8, 2024
by Bill Breeden

Ava, IL – Does anyone remember when these events were known as a "total eclipse of the Sun" rather than a "total solar eclipse?" Maybe it changed after Bonnie Tyler's famous 1983 song, or maybe it was changed because the latter sounds more scientific.

Preparing, staging, and packing all equipment was an event unto itself, and I begin this task the day before the eclipse. I certainly did not want to leave anything behind.

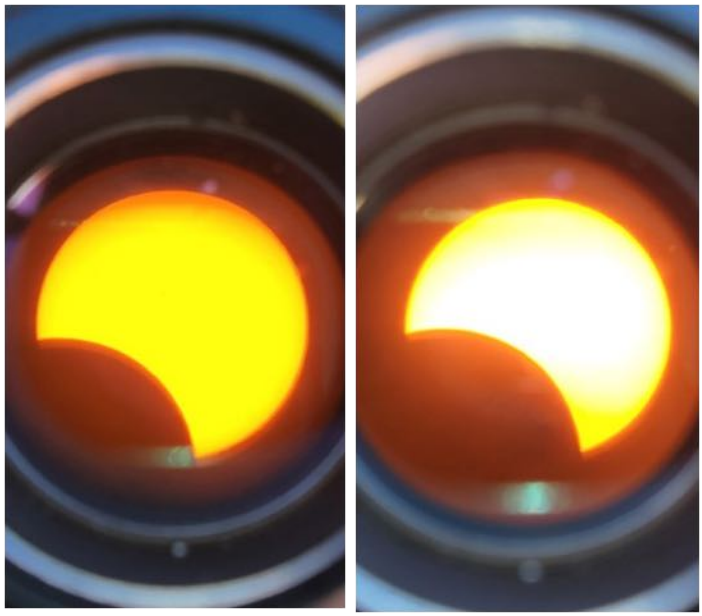
My wife and I caravanned to Ava, IL with Cook and Carol Feldman to enjoy the total solar eclipse with River Bend Astronomy Club. Dierks Farms Grass Fed Beef kindly permitted the club to observe the eclipse from their farm, which would experience 3 minutes and 45 seconds of totality. Members of River Bend planned to meet up at New Baden, IL and caravan to the site. Since we were coming from the Missouri side, we took the JB bridge to Route 3 and made our way there on our own. We left home at 8:30am, and arrived at the viewing site at 10:15am. Traffic on the way to the site was not an issue.



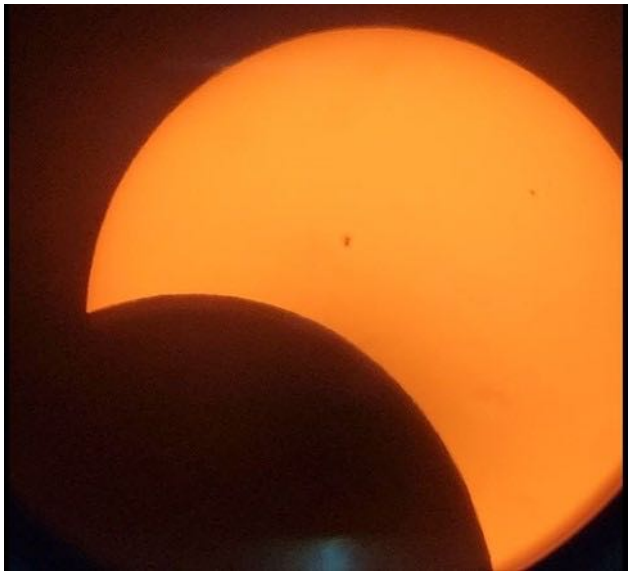
Staging and packing my equipment for the eclipse. Photo by Bill Breeden.

I set up my 8-inch Schmidt-Cassegrain telescope for the purpose of capturing the partial phases of the eclipse. I attached my Thousand Oaks white light solar filter to the front of the telescope. For picture-taking, I used my 32mm Orion Highlight Plossl eyepiece, my NexYZ smartphone adaptor, and my smartphone. I ran video mostly, but I did snap a few still images.

River Bend Astronomy Club members setting up for eclipse viewing. Photo by Bill Breeden,



Partial eclipse phases, 1:05PM (left) and 1:12PM (right). Photo stills by Bill Breeden.



Partial eclipse phases, 1:15PM Video captures by Bill Breeden

Partial eclipse phases, 1:23PM Video captures by Bill Breeden.

If you look closely at the images above, the two video captures (second two images) show sunspots, and are generally clearer images. In addition to the excitement of the eclipse, the sun treated us to much activity and many sunspot groupings.

Totality would begin at 1:59pm and end just before 2:03pm. This meant that we had a built-in perfect period in which to have lunch before second contact (start of totality).

Me having lunch (left). We also brought SLAS's Sunspotter along to safely view the Sun (right). This photo was taken before first contact. Photos by Jeff Menz and Bill Breeden.

Along with my 8-inch SCT, I also brought along my Canon T4i camera, tripod, and camera-lens-sized solar filter for taking videos of the eclipse in progress. I would remove the filter during totality (which I comically forgot to do for the 2017 total eclipse). My entire camera ventures would be limited to my smartphone (attached to the SCT and handheld), along with the Canon T4i perched atop its tripod. I would otherwise just enjoy the eclipse with my own two

Carol Feldman (left) and Rita Breeden (right), along with my SCT all set up and waiting for the eclipse. My Canon T4i camera and tripod are visible as well. Photo by Bill Breeden.

eyes. This minimalist approached worked like a charm, as I got wonderful photos of the partial phases, and a nice video of totality. It was part planning, part luck. The most enjoyable part of the experience was watching the spectacle's effect on the landscape around me, and just watching totality in the sky.

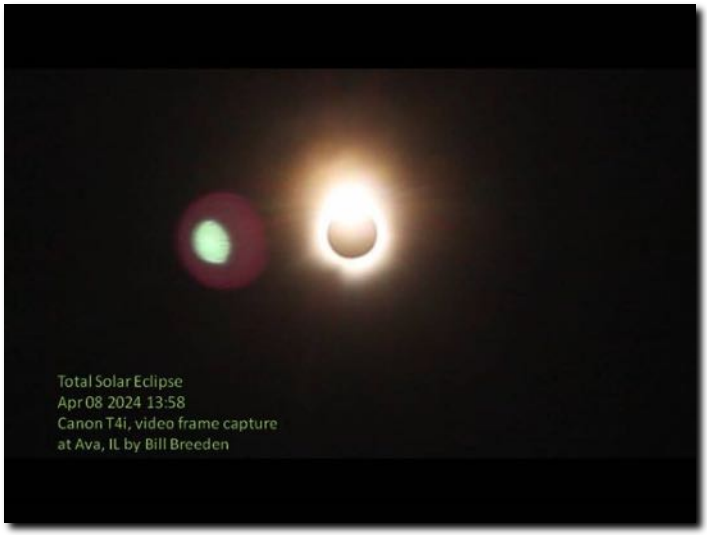
(Continued on page 5)

(Continued from page 4)

Previous page: Top This picture was taken at 1:57pm, just two minutes before totality. Photo by Bill Breeden.
Previous page bottom: This picture was taken at 2:00pm, during totality, to show the 360° sunset effect. Photo by Bill Breeden.

At 1:58pm, we stood and watched the sky quickly darken, the 360° degree sunset take shape, and the sun become a dazzling diamond ring. The Canon was recording with the filter on, and this was my queue to remove it. I did so, and proceeded to gaze at totality.

What an experience. Although I had experienced this in 2017, I was much more relaxed this time. The Canon was recording sans filter, and I simply stood there with my smartphone at my side. I snapped a few photos with it and captured the sunset affect, but mostly I just watched the sky. The only way I can describe totality is a glowing ring in the sky with filaments streaming from it. In the center, there is a perfectly round inky-black circle where the sun should be.



The Diamond Ring at second contact. The green object at left is a lens flare.

Totality

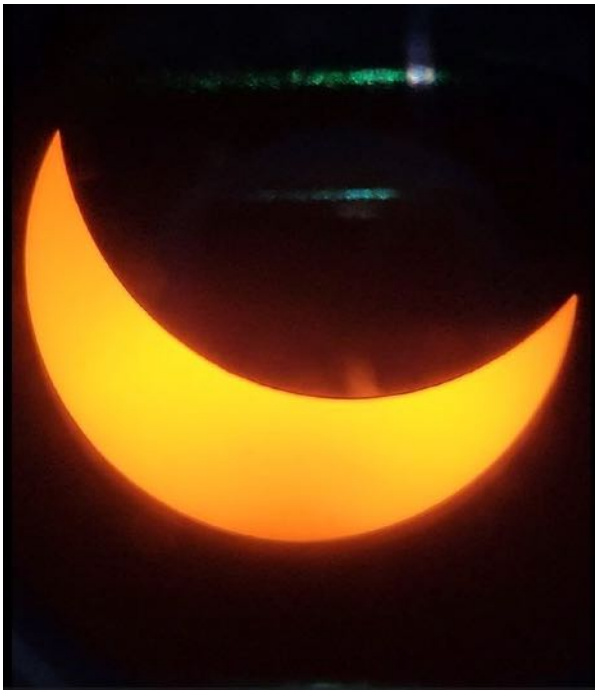
Totality is ending.

The Diamond Ring at third contact.

I was thrilled that my Canon T4i video turned out so well. The four images above are screen captures of the video. It was a combination of planning and luck, as I did not consider filming the event to be my top priority. I just wanted to see the eclipse. To have such a great location and perfect weather made for such a memorable event. Once the Diamond Ring reappeared at third contact (end of totality), I placed the solar filter back onto the Canon.

Field activity at 2:08 pm. Photo by Bill Breeden

I also reattached my smartphone to the SCT with the NexYZ smartphone adaptor, and let some video record the ending partial phases of the eclipse.



Partial phases following third contact, 2:23pm (left)
Photo by Bill Breeden.

I also used the Canon T4i to record during some of the partial phases, but basically I saved its battery for totality. Also, the NexYZ recordings of the partial phases turned out much better since they were taken through my telescope. I had the Canon set at 50mm so that I would have a large field of view (and a smaller sun), in order to guarantee that the sun would not leave the field of view during totality. That is about as far as my planning went.

Fourth contact (end of final partial phase) would occur at 3:17pm. We packed up and left the site just before then, hoping to beat some of the traffic on the way home. Route 3 was certainly busy, but we arrived in St. Louis by 6:00pm. Not too bad at all! The four of us wrapped up the day with dinner at Denny's and discussed the amazing event we just observed.

This was a perfect day – one for the record books! I hope you all were graced with an experience as great as this!

Here are links to my videos on YouTube, from which many of these captures originated.

https://youtu.be/e7GLnrGqQaQ?si=j4rmHKILpLkxdPUX

https://youtu.be/lboMExukfMc?si=dsuU7VuOxzE0bg02

Clear Skies,

Bill Breeden

Report from Don Mason

Thank you Jim and Mark,

I got stuck in the 55 traffic for the eclipse at Pevely heading toward Farmington. I pulled off at an exit and set up a small 4" Celestron refractor and did a projection at a McDonald's, Ha! A Japanese guy, also stuck in the traffic, set up his 6" reflector in the same parking lot. People came and looked at my projection foam board taking pictures as the sun became a very small sliver. I was just out of the zone, so it became twilight instead of dark, just barely enough that the street lights came on. Luckily, I was in Farmington in 2017, so I saw the full eclipse/dark/and street -lights-on that time, viewing w/4", plus, I also used a 6" Thousand Oaks glass filter on a 6" CR6 scope visually.

Enjoyed the Jupiter mtg. last night,

Don Mason

astrocyberkat@gmail.com

For Sale

For Sale $800 17.5 inch Dobsonian Telescope

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

St. Louis Astronomical Society
Devoted to the Interest and Advancement of the Science of Astronomy
Executive Board Meeting Minutes 4/4/2024

1. Opening Activities: a. Attendance: Jim Small, Randy Harrison, Bill Winningham, Mark Jones, Brent Buch, Brad Waller, Dennis Latinette, Larry Campbell b. Open Meeting: opened at 7:05pm c. Approval of last month's minutes. Brent motion to approve the March minutes, second by Larry. Minutes approved d. Next Board meeting date (on approval of board): 5/2, 6/6, 7/11, 8/1, 9/5, 10/3, 11/7, 12/5 Meetings will be via Zoom until further notice: Standing Action: SLSC Report by Will Snyder Action: Get LTP brochures to SLSC. Dennis to contact Don Ficken about getting LTP brochures or business cards. Report: Don is reworking the LTP brochure. Brad will bring SLAS quartercard to SLSC for FF. Action: Randy and Brad to add SLSC events to NSN calendar. Report: Solar Sunday events have to NSN calendar for March, Randy will add the April thru September events. Brad has added FF dated thru 2024 and 2025. Action is complete First Friday – Apr 5, None in May, June 7. Events for July-Dec still being finalized Solar Sunday – 4/7, restart 6/2, 6/9, 6/16, 6/23, 6/30, 7/7, 7/14, 7,21, 7/28, 8/4, 8/11, 8/18, 8/25, 9/1

2. Upcoming General Membership meeting topics: a. Speaker: Fran Bagenal, PhD. Exploration of Jupiter System: Past, Present and Future, Univ of Colorado b. Schedule room at Wash U.? Yes c. Who is recording meeting? Brent d. Special Awards needed Handout leftover Anniv and Outreach certificates e. Speaker Press Release and social media: Press needs to be updated and reissued. Rich plans to reissue 4/10 f. Special Business – Upcoming nominations. President – Jim Small Vice President – Brad Waller Treasurer – Bill Winningham Secretary- Mark Jones Hospitality- Dennis Latinette BMAL27- Brent Buch BMAL26- Larry Campbell g. A101 – Eclipse stories and photos f. Hospitality: nothing special. Brad will bring cookies a. Budget – 2024 Budget $360, balance $347 Action: Larry to buy large plates and forks. Acton complete

3. SLAS Financial Report a. Balance Sheet: Balance sheet: assets $85,110 b. Profit/Loss report: thru Feb Net loss $854, budget loss was $1178; $420 sales in eclipse glasses c. Annual Budget meetings: start in September d. State Corporate filings: 2024 Budget: $20, paid in even years only, not due until August 2024. Federal Form 990 due May 15th e. Insurance; 2024 Budget $1165, due May 1st f. Astro League Dues: 2024 Budget: $1070, AL sends invoice around July Motion by Bill Winningham for Board to approve Don Ficken having access to PayPal account for purposes of executing his Membership responsibilities. Second by Brent. Board approved motion.

4. Speaker Committee If you are working on a Presenter, please keep Brad informed. Budget – 2024 Budget $600, Balance $69 We will have hotel fees for March and May We will go over budget this year because offering visiting speakers hotel. Brad estimates $300 needed for May speaker and $100 for shipping for remaining this year. Board approved extra expenses. b. Upcoming speakers:

SLAS Monthly Meeting Presentations 2024

Month	Name	Topic	Sponsor
19-April-2024	Fran Bagenal, PhD	Exploration of Jupiter System: Past, Present and Future	Univ of Colorado
17-May-2024*	Gautham Narayan, PhD*	Dark Universe with the Vera Rubin Observatory	Univ of Illinois
21-June-2024	Steven R Gullberg*	Archeo Astronomy	Univ of Oklahoma
19-Jul-2024	Davies, Ashley G PhD	Juno, Close Flybys of Io	JPL
16-Aug-2024	Bradley Tsalyuk	Samuel Oschin Air and Space Center, California Science Center	
20-Sep-2024	Joseph Marcus, MD,	""Who Discovered the Expanding Universe? Spoiler: Not Hubble!"	
18-Oct-2024	Pamela Gay, PhD*	Super Secret Squirrel Stuff (S^4)	Planetary Science Institute
15-Nov-2024	Robert Zubrin	The Case for Mars	Mars Society
20-Dec-2024	K Michael Malolepszy	Probing the Sub-Microwave Universe, Part III	SLAS Member
17-Jan-2025	Bhupal Dev, PhD	Finding New Physics in Debris from Colliding Neutron Stars	Wash U|
21-Feb-2025	Open		
21-Mar-2025	Tom Rathjen	What's Happening in Human Space Flight	Aerospace Corp

*Possible Live Speaker (Speaker budget may be used to pay for hotel room for speaker) d. Topics of interest - Mark sent Brad email to possible speakers from UMSL, U of Illinois and U of MO Columbia e. Stipends f. Travel other hotel options

5. Membership Initiatives a. Budget – 2024 Budget $600, Balance $450 Welcome Aboard Meetings – These have been replaced the following standing action. Standing Action: Mark Jones will send out member orientation materials when member joins. Also, schedule monthly member chat meetings are held via Zoom on the Thursday after the general meeting. Action: Mark to convert new member questionnaire from Word doc to Google survey. c. Raffles – not planned d. Attendance prizes – In-person and virtual members will be eligible for attendance prizes in 2024, next prizes in June Action: Engaging younger people with SLAS. Try live-stream from JCO via Twitch. Jim to perform dry-run of live stream and Brent. Link to how-to Twitch https://riverside.fm/blog/how-to-stream-on-twitch; https://twitchtracker.com/channels/live. Update: Ms Sophia Edgell, undergraduate at Brown University has agreed to help SLAS with curating our Twitter and Instagram accounts and create a new TikTok accounts. These media outlets are popular with younger adults and kids.

6. Membership Recognition a. Total Budget 2024 Budget $500, Balance $456 b. NSN Outreach Awards: Awards made in Feb each year, 2023 pins are still in store room Action: Jim to submit NSN pins for reimbursement. Action closed c. Membership Report: membership report showing 227 members. This month's count represents a gain of nine member over last month and a gain of two members this year. d. Member anniversary – Next event is November meeting, 2023 pins are still in store room e. Special Award program - 1. Special Award Committee report: Chairman: Bill Biermann. Members: Larry Campbell, Jim Small, Mark Jones, Sharon Bertram, Fred Schovanez, Bill Neubert, Grant Martin, Bill Bierman, Rich Heuermann, Joe Marcus
2. Special Award deadlines: Current Nomination deadline is Sept 1st 3. Nomination reviews: by October 1st 4. Award selection: selections made in November 5. Awards presented at December meeting – Action: Bill Biermann to create March 13 meeting for Special Awards Committee in NSN calendar. Meeting was held March 13. Action closed.

7. Outreach - a. Budget – 2024 Budget $500, Balance $250 (2 tablecloths and banner) b. Member Training Program Status: c. Purchase of T-shirts for volunteers completed training per budget: Action; Mark need T-shirt design. Mary and Joe Barteau volunteered to come up with T-shirt designs. Slideshow of examples sent to Board on 10-31-23. Action remains open until final design selected. Board preferred Safety Green in style #3 is preferred by Board Do they have t-shirt in a Tall/long? d. Purchase signs for outreach per budget: Expecting new tablecloths to be posted March financial report Action: Jim Small to create artwork for tablecloths. Report: Jim ordered and received the two table covers for a total of $250.10, it will also include a free 30x60 banner. Action should be closed. (Locations: 1 old tc is at SLSC, 1 old TC is with Don Ficken, 1 new TC is with Don Ficken and 1 new TC is with Mark Jones Action – Jim to check with vendor a new banner was supposed to come with order e. Upcoming outreach events: Gateway Arch - March 23, 2024 (Saturday), May 11, 2024 (Saturday), June 14, 2024 (Friday), July 12, 2024 (Friday), August 10, 2024 (Friday), September 13, 2024 (Friday), Oct 18, 2024 (Friday) Francis Park – Dates for 2024: April 17, May 15, June 12, July 10, August 7, September 11, October 9
Tower Grove Park – April 13, May 18, June 15, July 13, Aug 10,

Sep 14, Oct 12 DobsonFest – Sep 14 hosted by Riverbend Astronomy Club First Friday –Mar 1, Apr 5, None in May, June 7. Events for July-Dec still being finalized Solar Sunday – 4/7, restart 6/2, 6/9, 6/16, 6/23, 6/30, 7/7, 7/14, 7,21, 7/28, 8/4, 8/11, 8/18, 8/25, 9/1 Note – Planetarium parking lot should be open for all events after Mar 10th. Action: Randy to add Dobsonfest including details for location and times to NSN calendar and solicit volunteers f. Awards/recognitions – g. NSN Outreach hours: Total Hours Reported in NSN: 175.8 in 2024

8. Old Business: A. Discuss issues with volunteers for star parties. Perhaps appoint a coordinator whose main job is to insure we have adequate number of members in the volunteer pool for events. Discuss methods to encourage members to volunteer for star parties. Try to find out why people aren't volunteering. Come up with an action for this issue. Coordinator Meeting Report: We increased the number of NSN coordinators from 12 to 20, and we held a meeting (1/31/24) to discuss how to get more volunteers. Decision was made to create a call list and call each member an ask them if they wish volunteer. Timeline: final Script by 2-11-24; final Email by 2-14-24; final Call list by 2-23-24; calls made: starting 2-23-24 end call by 3-10-24 Action: Bill Biermann to create final call list and assign to each NSN coordinator. List completed 3 -14-24. Action closed Action: Mark to send call list to the NSN coordinators B. Scholarships from SLAS- Questions: How to fund via interest earned, How do we select candidates, do we need a committee, are there tax impacts for this, How do we define qualifications? Will we need to send 1099 form? Action: Brad to set up meeting to discuss how scholarship could be funded and executed. Brad will talk to his tax adviser but not until May Board Meeting.

9. New Business
MSRAL Amateur of the Year Nominations requested by Jon Larsen, 2024 AOY Selection Committee Chair, pres@omahaastro.com Info needed includes: Club Affiliation; Title: (if applicable); Submitter's Name; Submitter's Contact Email; Submitter's Title: (if applicable) Action: Jim to post info on SLASDialogs and/or NSN.

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

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

C. Jefferson College Business: a. Committee Meeting report: Possible new Eagle Scout projects Mount weather station Build roll-off building for solar scopes Mount other science equipment (meteor cameras, night sky meter) b. Upcoming Outreach Event: JCO – April 20, May 18, Jun 15, Jul 20, Aug 17, Sept 14, Oct 10, Nov 16

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

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

F. SLAS Brochures a. Budget 2024 $600, Balance $448 b. Quarter cards – Action: Brad to create new artwork for Quarter Card. Report: Artwork sent to Inkspot. Artwork contains 5 images provided by Randy Harrison. Will ask Inkspot to print 100 of each for a total of 500 cards. 4-2-2024 Brad ordered and received the 500 Quartercards. Action can be closed.

G. Loaner scope Program a. Budget – 2024 Budget $100, Balance $88 Report: Jeff Carpentier has volunteered to help restore the 1975 model C8 telescope. Bob Klein has also volunteered to help. b. New donations: Possible older telescopes but look brand new - Coronado SolarMax 90 and a smaller one, MaxScope 40. We have an Orion Skyview Pro mounting, c. Replacement Parts for the LTPs - d. Items for sale several:

H. SLAS Library a. Budget – 2024 Budget $200, balance $200
Other – 2024 TSE.
FAQ was added to SLAS website. SLAS has location selected to observe the eclipse. Location is parking lot of Marcus Cape West Cinema, Cape Girardeau, MO
SLAS purchased 10,676 eclipse glasses in 2023. As of April 1st we have 1300 glasses left. We sold $1605 worth of glasses. Our original cost was $3150.
SLAS has 11 Sunspotter Telescopes to loan to schools and other organizations for the TSE. 4 Sunspotters have been loaned to Rockwood School District until after the eclipse. 1 Sunspotter loaned to Rich Fefferman for Arch events. 1 Sunspotter loaned to Bill Breeden for Francis Park events. 1 Sunspotter loaned to Perryville. 1 Sunspotter loaner to Luthern Hight School
Four SLAS members make up DEB Initiative Team 019. Maryanne Angliongto; Mark Bremer; Ashvik Chilakala; Buz (Carl) McCullough. We will be imaging the eclipse at Sam A. Baker KOA campgrouind at Paterson, MO. The manager of the campground gave us a site with power; water; restrooms and A/C in exchange for Maryanne hosting a Star Party and the team doing outreach on eclipse day.

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

J. Telescope Making

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

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

M. Social 76 members of Private FB page 3152 followers on Public FB

N. Night Sky Network

O. SLASdialogs (part of Website Budget) SLAS Groups.io – 135 members Annual $110 account fee is coming due Jan 8th 3.2GB of 30GB is being used

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

Q. Observing Programs

R. Star Parties Donation:

11. Closing Activities: Former SLAS member Andy Kniffen died at 84. He was a quiet sort of guy and would attend now and then Mensa lunch bunch and general meetings and the St. Louis Astronomical Society's general meetings. Please see the following URL for his picture and more:

https://kurrusfh.com/obituaries/lt-col-ret-andrew-e-kniffin/

Motion to adjourn the meeting by Brad and by Bill, meeting adjourned 9:23pm

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

	Jan - Apr 24	Budget	$ Over Bud...
Ordinary Income/Expense			
Income			
Events Income	520.00	250.00	270.00
Magazine Subscription	1,650.75	998.70	652.05
Membership Dues	2,205.00	1,640.00	565.00
Total Income	4,375.75	2,888.70	1,487.05
Cost of Goods Sold			
Magazine Subscriptions	1,121.69	998.70	122.99
Total COGS	1,121.69	998.70	122.99
Gross Profit	3,254.06	1,890.00	1,364.06
Expense			
1-Programs & Events	899.01	1,420.00	(520.99)
2-Newsletter	317.48	200.00	117.48
3-Library expense		50.00	(50.00)
5-Loaner Scopes	11.84	50.00	(38.16)
6-Brochures	298.60	200.00	98.60
8-Website	343.47	400.00	(56.53)
9-Administrative Expenses	1,166.98	1,272.60	(105.62)
Jefferson College Observat...	85.00		85.00
Total Expense	3,122.38	3,592.60	(470.22)
Net Ordinary Income	131.68	(1,702.60)	1,834.28
Other Income/Expense			
Other Income			
Donations	690.00		690.00
Interest Income	409.32	20.00	389.32
LTP Receipts	30.00		30.00
Total Other Income	1,129.32	20.00	1,109.32
Other Expense			
LTP Disbursements	158.20		158.20
Total Other Expense	158.20		158.20
Net Other Income	971.12	20.00	951.12
Net Income	**1,102.80**	**(1,682.60)**	**2,785.40**

St. Louis Astronomical Society
Balance Sheet
As of April 30, 2024

	Dec 31, 23	Apr 30, 24
ASSETS		
Current Assets		
Checking/Savings		
Checking - First Bank	12,072.69	13,697.11
Deposit, Certificate of	16,000.89	46,409.54
Library Telescope Escrow	1,964.87	1,836.67
PayPal	152.96	593.48
Savings - First Bank	43,138.18	13,138.85
SLAS Eclipse Conference Escr...	2,580.32	2,580.32
Total Checking/Savings	75,909.91	78,255.97
Other Current Assets		
Inventory Asset	841.87	781.21
Undeposited Funds	75.00	0.00
Total Other Current Assets	916.87	781.21
Total Current Assets	76,826.78	79,037.18
Fixed Assets		
Accum Depr - Office Equp	(216.65)	(216.65)
JC Scope and Observatory	9,137.44	8,029.84
Office Equipment	216.65	216.65
Total Fixed Assets	9,137.44	8,029.84
TOTAL ASSETS	**85,964.22**	**87,067.02**
LIABILITIES & EQUITY		
Equity		
Opening Bal Equity	8,497.66	8,497.66
Retained Earnings	81,754.13	77,466.56
Net Income	(4,287.57)	1,102.80
Total Equity	85,964.22	87,067.02
TOTAL LIABILITIES & EQUITY	**85,964.22**	**87,067.02**

We could use articles for the newsletter. The following topics are fine for submission.

1. Star party reports. Let us know how a star party you attended went! Photos would be most welcome in addition to the article.

2. Observing reports. Actually made it out observing? Let us know how it went. Taken some astrophotos? Please submit!

3. Bought something or built something? How about a review or an article!

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

Upcoming Star Parties and Other Events

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

SLAS Executive Board Meetings All meetings are on First Thursdays unless noted. ***Note: Board meetings will be via Zoom until further notice.*** Dates 6/6, 7/11, 8/1, 9/5, 10/3, 11/7, 12/5

SLAS Dark Sky Observing Dates All dates on Saturdays 6/1, 7/6, 8/3, 8/31, 9/28, 10/5, 10/26, 11/2, 11/30, 12/28

Francis Park Events: These events are on Wednesdays of the week nearest the first quarter Moon 6/12, 7/10. 8/7, 9/11, 10/9

Aim for the Stars Public events held on 3rd Saturdays at the Jefferson College Observatory and Patio. 5/18, 6/15, 7/20, 8/17, 9/21, 10/19, 11/16, 12/21

Stargazing at the Arch Events for the public held at the Gateway Arch 6/14, 7/12, 18/10, 9/13, 10/18

Sky Orienteering Events For members who want to gather and do some relaxed observing at Babler State Park (BSP) or at the Jefferson College Observatory (JCO) Please RSVP if you plan to come!

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month Planetarium shows start at 7pm

Dobsonfest - Sept 14 hosted by Riverbend

Pattonville Observatory Public Viewing Dates See you in August, 2024

Broemmelsiek Astronomy Park Public Viewing Every Friday

UMSL Observatory
For directions and map
http://www.umsl.edu/~physics/About%20the%20Department/astro.html All sessions include viewing of 1st quarter Moon with additional objects Skywatch Hotline: 314-516-5706
Saturdays:

LET US KNOW YOU ARE COMING!

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

SLAS Events

	May
11 Sat	Stargazing at the Arch
15 Wed	Francis Park
16 Thur	Stacy Park
17 Fri	Crestwood Park
17 Fri	SLAS Regular Meeting
18 Sat	Ferguson Farmers Market
18 Sat	Tower Grove Stargazing
18 Sat	Aim For the Stars at JCO
23 Thur	SLAS New Member Zoom
	June
1 Sat	SLAS Dark Sky at Danville
1 Sat	Scouts at JCO
2 Sun	SLSC Solar PTV
6 Thur	SLAS Board Meeting
6 Thur	UMSL STEM
7-9	MSRAL 2024
7 Fri	First Friday SLSC PTV
8 Sat	St Louis Air Show
9 Sun	St Louis Air Show
9 Sun	SLSC Solar Sunday
12 Wed	Francis Park
13 Thur	Stacy Park
14 Fri	Stargazing at the Arch
15 Sat	Tower Grove Stargazing
15 Sat	Aim For the Stars at JCO
16 Sun	SLSC Solar Sunday PTV
21 Fri	SLAS Regular Meeting
22 Sat	Backyard Campout in Des Peres Park
23 Sun	SLSC Solar Sunday PTV
27 Thur	SLAS New Member Zoom
	July
6 Sat	SLAS Dark Sky at Danville
7 Sun	SLSC Solar Sunday
10 Wed	Francis Park
11 Thur	SLAS Board Meeting
12 Fri	Stargazing at the Arch
13 Sat	Tower Grove Stargazing
14 Sun	SLSC Solar Sunday
19 Fri	SLAS Regular Meeting
20 Sat	Aim for the Stars at JCO
21 Sun	SLSC Solar Sunday
25 Thur	SLAS New Member Zoom
28 Sun	SLSC Solar Sunday
30 Tue	Camp Emeth Late Night
	August
1 Thur	SLAS Board Meeting
2 Fri	First Friday PTV SLSC
3 Sat	SLAS Star-B-Q Stacy Park

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

SLAS Merchandise Available

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

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

SLAS MEMBERSHIP APPLICATION

Name: Last _____

First, Middle Initial _____

Address _____

City, State, Zip Code _____

email address _____

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

St Louis Astronomical Society

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

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

Individual @ $25.00 / 1 year $_____

Family @ $40.00/1 year $_____

Publications with discount available with your SLAS membership:

Sky and Telescope @ $45.75 / 1 year $_____

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

Astronomy @ $34.00 / 1 year $_____

TOTAL ENCLOSED **$_____**

Check all that apply:

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

SLAS OFFICERS

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

Board Members at Large

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

Randy Harrison 618-267-1659
board25 at slasonline.org

Dennis Latinette 314-713-9258
Board26 at slasonline.org

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

MSRAL Rep. ***Peggy Walker*** 918-640-0832
msral_rep at astroleague.org

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Social Media *Vacant*

'SLASdialogs' Moderator ***Mark Jones***
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!
http://www.slasonline.org

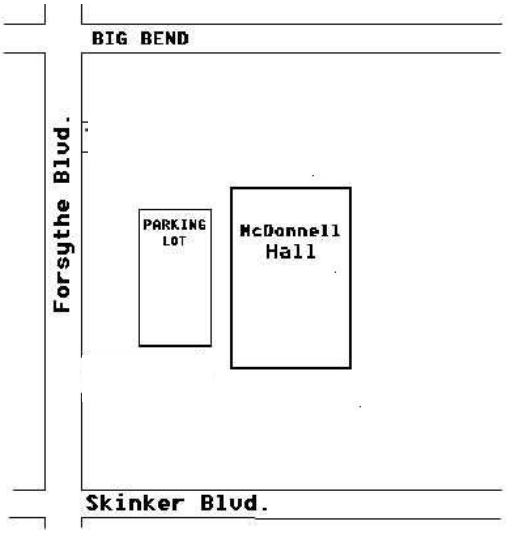
Follow us on
Twitter: @stlastro
Facebook: @stlastro

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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