THE EVENT HORIZON



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

VOLUME 31, Issue 11 November, 2021

SLAS Regular Meeting Friday, November 19, 2021 7:30pm The Voyager Spacecraft Golden "Greatest Hits" Record AND What is the Fate of the Voyager Spacecraft?| *by* Jon Lomberg and Nick Oberg

The Voyager Spacecraft Golden "Greatest Hits" Record AND What is the Fate of the Voyager Spacecraft? Jon Lomberg and Nick Oberg will present during this two-part presentation about the spacecraft.

The Voyager 1 and Voyager 2 spacecraft provided spectacular views as they flew by Jupiter and Saturn in 1979 and 1980-81. Voyager 2 traveled on to encounter Uranus and Neptune in 1986 and 1989. Mounted on each spacecraft was a gold-coated copper record containing pictures, music, and greetings from many cultures, languages, and traditions. Both Voyagers are traveling fast enough to escape our solar system. Their golden records are intended to represent Earth to alien civilizations, should a Voyager be found, possibly thousands of years from now. Jon Lomberg will talk about the Golden Records and his experiences with their design, content selection, and production.

The Voyager spacecraft carry with them a record depicting life on Earth for whomever may one day stumble upon it. Floating freely in the vacuum of space, the records are expected to survive for geological ages, but for how long precisely? Nick Oberg's group use state of the art data on stellar positions and motions to follow the spacecraft as they depart the solar neighborhood. We track their movements through the galaxy on their long, 200 million year orbits, and compute the slow but steady rate of erosion the records will face from the omnipresent interstellar dust. Finally, we consider the fantastically long-term fate of the spacecraft, if either of them are ejected from our galaxy during its merger with M31.

Artist Jon Lomberg was the Design Director for NASA's Voyager spacecraft Golden Record project. He was also the Chief Artist for Carl Sagan's original COSMOS series and designer of the animated opening of the film CONTACT. Winner of the Emmy and numerous other awards, he has an asteroid officially named after him. He lives in Hawaii, where he designed the Galaxy Garden, the world's first large scale explorable model of the Milky Way Galaxy.

Nick Oberg is a 4th year doctoral candidate at the Technical University of Delft in the Netherlands. He grew up in Belgium, but his father came originally from Missouri. Now, Nick works full-time on computational models of giant planet moon formation.

Upcoming Meetings 2021 December - Scott Roberts

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Joining a Zoom Conference Meeting: Everyone can join! No Computer Required!

Joining us for a Zoom Conference is easy! All you need is any of the following: Computer, desktop or laptop, smartphone, **OR** any regular phone! The meeting will be open from 6:30-11pm. The extra time is to allow socializing before or after the meeting

Below is the invitation to join: To join Zoom Meeting for SLAS Regular Meeting with computer or smartphone: Just click the link below: <u>https://zoom.us/j/8604505790</u> Meeting ID: 860 450 5790

Dial by ANY phone using your location (any phone will work) +1 312 626 6799 US (Chicago)

Budget Inside!

President's Corner

It's been a long couple of months. Apologies for the newsletter fiasco for the last couple of months. November being a day or two late might have been acceptable, but not a month!

I was slowed down a bit after getting Covid-19. Fortunately, I had been double vaccinated, so it was a relatively mild case compared to what it could have been. I received an infusion of monoclonal antibodies which helped speed up recovery. However, I was still pretty low in energy for a couple of weeks. My best guess about where I caught it was most likely at the observatory. There I made several errors. 1. I didn't wear a mask. Duh. Not sure why. It was just stupid, especially since there were lots of kids who most likely had no protection. 2. I was inside the observatory most of the evening, so a tight, inside space. 3. I did-

Assumption Summary – 2022

St. Louis Astronomical Society Annual Budget

Work began on the 2022 budget after the financial close for August 2021. The year to date information is therefore through August 31, 2021 with an estimated projection of activity from September 1, 2021 through December 31, 2021.

The budget information was assembled partially based on assumptions developed from the August 2021 year to date actual in areas such as membership information available at that time. The balances of the budgetary items were prepared on a line by line basis by the individual committees and committee chairpersons.

Revenue / Income:

The primary source of Revenue for the Society stems from membership fees that are assessed on an annual basis that is based on the member's individual anniversary date. The current fee structure was adopted in 2004 where the "Family Membership" was created and set at an annual rate of \$40.00 per year. At the same time, the fees for the Youth membership were decreased from \$15.00 to \$10.00 per year.

The total revenue from the membership fees for 2022 is based on:

Regular (Adult) Memberships 144 @ \$25.00/year \$3,600 Youth Memberships 2 @ \$10.00/year 40

Family Memberships 39@ \$40.00/year 1,560

Albeit that the Society does receive donations for the outreach activities, these donations have been ignored for the purpose of the 2022 budget due to the uncertainty. Donations for plan St. Louis County Library (SLCL) events, for which we have a written agreement are also assumed to be 0 for 2022, due to COVID 19 restrictions.

As indicated in the budget, this will provide operating revenues in the total of \$5,600 for 2022. The actual revenues that will be realized during the calendar year may be different due to any changes in the actual membership numbers.

Magazine subscriptions are referenced as a memo item. The Society acts solely as an agent in these transactions as a convenience to the membership. It should be noted that the same n't sanitize my hands afterwards. Duh. And I had hand sterilizer in my car! 4. Didn't wash hands before I ate some taco bell afterwards, so almost shoving my hands in my mouth! DOH! Ok, that's enough of that vent. Moral of the story:

- 1. Get double vaccinated AND get the booster
- 2. WEAR A MASK!!!
- 3. Sanitize hands fairly often, especially before you eat!

The budget is in this issue and will be voted upon at the December meeting. I was sent out as a link early in November by Bill Winningham. There will be an opportunity to discuss at the meeting. MANY thanks to Bill for all the work he put into it for the presentation!

We have some good speakers coming up, including Scott Roberts for the December meeting! Be sure you don't miss that talk, especially if you need a new inspiration!

See you at the meeting! Jim Small

"Club" rates for the subscriptions are available to each member in good standing through the Night Sky Network for those who choose that option.

Operating Expenses:

These are expenses that are incurred to run the Society on a month to month basis to provide goods and services to the membership. Some of the expense categories are required to meet specific obligations that enable Society to function as an organization. The balance of the expense categories are considered discretionary and may be adjusted accordingly. The items that will be discussed in detail are the discretionary items.

Newsletter Expense:

The newsletter expense consists of \$225 for paper, toner and other supplies, \$175 for postage, and \$200 for an updated copy of Publisher.

Events

The Homemade Fest budget remains \$100. This budget is primarily used to purchase refreshments, plates, plasticware and door prizes. SLAS hopes to continue getting the meeting room free of charge from the Science Center or the Kirkwood Community Center. Kirkwood waived the fee in the past because of our hosting telescope viewing at Kirkwood Park at least twice a year.

The Star-B-Que remains at \$200. This event will again be member potluck with SLAS providing the meat, paper goods, and trivia quiz prizes. SLAS hopes to continue getting the picnic pavilion free of charge. This is normally an \$80 charge, but Babler has waived the fee because of our hosting Night Skies Over Babler twice a year. The members in attendance will be asked to provide items as with the Homemade Fest to complement the main course provided by SLAS. This will require that the membership provide their RSVP and number of attendees so the event can be planned accordingly.

Library Telescope Program:

The SLAS Library Telescope program's was launched into the St. Louis area on November 2014. In just a few short years, the program has grown to one of the largest and most successful pro-

(Continued from page 2)

grams in the country. On all fronts, the library telescope program is demonstrating success.

The LTP Committee's focus for the upcoming year will be on the following four areas:

1. \$100 – maintenance budget to cover all the little things that we need to keep the telescopes in top shape (the big things we charge to the libraries) and to reimburse mileage for SLAS Members who travel to multiple library locations to perform maintenance or repair on the library telescopes. The rate will be the current IRS rate for charitable contributions (\$.14) (IRS.gov). The SLAS member requesting reimbursement should provide a spreadsheet log documenting their travels. This should include: dates, mileage, and locations visited. Reimbursement requests should be made guarterly

2. \$200 – funding for replenishing promotional material/handouts such as business cards The Library Telescope Committee requests \$300 in operating expenses to cover items 1 and 2 above.

Meeting Expense:

Meeting expense is comprised of Meeting Refreshments and Meeting Speaker Fees. The meeting refreshments are selfexplanatory and have been budgeted at \$360 same as the 2021 budget level. Due to COVID 19 related limitations on in person meetings, the refreshment budget will be prorated to the extent that in person meetings actually take place. The Meeting Speaker Fees are used primarily to present honorariums to guest speakers and occasionally to partially offset travel expenses. The speaker budget has ranged between \$250 and \$600 in recent years. The 2022 speaker budget will be \$400, which includes expected travel expenses (unlikely) for 1 to 2 speakers and a stipend for 1 to 2 graduate student speaker.

Membership Initiatives:

SLAS regularly holds "Welcome Aboard" meetings for new SLAS members. These meetings take place before the Monthly Meeting. New SLAS Members are given a SLAS Informational Folder containing information about SLAS resources and other related Astronomy topics. The budget for Membership Initiatives was increased from\$450 to \$500 for 2022 to reflect the increased cost of mailing prizes do to meeting being on Zoom. Membership Initiatives, as in recent years, plans to hold raffle events during 2022 as opportunities arise. Past raffles involve tickets to special speaker events such as when Neil deGrasse Tyson and Jim Lovell came to the area. Membership Initiative also intends to continue the practice of awarding attendance and other prizes to the membership. Examples of some of possible prizes for 2022 include sponsoring a membership to McDonald Observatory, telescope eyepieces, and cell phone adapters for telescopes. Please feel free to suggest your ideas for membership prizes to Brad Waller at vicepresident@slasonline.org. The budget reflects the potential cost of having to mail attendance prizes for Zoom based meetings.

Membership Recognition:

The membership recognition budget for 2021 is \$550. This budget include cost for Night Sky Network pins and certificates, recognition of members for continuous membership in SLAS and for contributing time for other SLAS functions, including the recently adopted award program. The budget includes the costs for the five new awards were made available beginning in 2020, including plates for the main award displays, individual plaques for award winners and associated mailing costs. A membership recognition committee was formed and an email address, recognition@slasonline.org was set up so that recommendations can be submitted to the committee.

Merchandise:

The merchandise budget includes \$200 for a mug design/setup and \$450 for mug inventory. Some of the mugs will be used for speaker gifts, the rest will be available for sale to the membership.

Library:

Library expenses for 2022 includes approximately \$500 for a model James Webb telescope and the purchases DVD's and books.

Loaner Scope Program:

For 2022 the budget is \$100 which is intended to cover miscellaneous repair cost. The loaner scopes are in the process of being relocated to a more accessible location. This amount does not include proceeds from the sale of excess loaner scope inventory, which will be reinvested into the loaner scope program.

Outreach:

The outreach budget for 2022 is \$620. The budget includes \$500 for the purchase of shirts for members who complete outreach training and participate in outreach events, handed out quarterly. The budget also includes \$120 for the purchase of yard signs. Additional details of the training program will be announced when COVID related restriction allow.

Website/Technology:

The budget for the Website and internet related technology was increased from \$690 to \$750 for 2022. The budget includes approximately \$260 for website hosting, \$110 to maintain Group.IO (replacement for SLAS Dialogs), various web address licenses, and \$200 to purchase a SLAS owned ZOOM account for virtual meetings and virtual sky tours.

Dark Sky

SLAS will donate \$500 to the International Dark Sky Association of Missouri to be used to sponsor a booth at the national meeting of the International Dark Sky Association.

SLAS Brochures:

The SLAS brochure is due for a complete redesign. The brochure expense consists of \$600 for paper and toner and potentially another order of "Quarter Card" handouts.

Summary:

The Board and participating committee members have adjusted several budget items in recognition of the COVID-19 pandemic. Some items will be prorated to the extent that that in person meetings continue to be restricted. The budget also includes the addition of a Zoom license that will allow SLAS to host and record virtual meetings. Note for 2020 and 2021, Zoom meetings were conducted using SLAS member's Zoom accounts. Expected revenue is up for 2022 due to an increase in membership during

the year. The net result is 2022 budget as presented equals a net loss from operations of \$3,487, compared a budgeted net loss of \$3,607 for the 2021 and a budgeted net loss of \$2,756 for the 2020. Meeting the projected expenses for the upcoming year will require supplementing the operations from cash reserves to the extent donations and other revenue sources do not make up the shortfall. All attempts have been made during this process to continue to provide valued programs for the membership.

If you have questions about the amounts presented in this budget, please direct them either to me or the relevant committee chairs.

Respectfully,

Bill Winningham, Treasurer

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(2019)	\$ 2,924.55	\$ 500.00		500.00	NA		\$ (2,655.00)		\$ 3,620.00		450.00	100.00	470.00	200.00	650 00	300.00	100.00	400.00	500.00	350.00	100.00		\$ 965.00	\$ 3,305.00		610.00	90.00	40.00	30.00	100.00	•	285.00	825.00	825.00	\$ 500.00		\$ 4,270.00		2019	Annual			
(2020)	\$ 1,631.18	\$ 3,200.00	3,200.00	•	N/A		\$ (2,755.50)		\$ 4,810.00		650.00	100.00	500 00	200.00	1 100 00	900.00	•	400.00	500.00	360.00	100.00		\$ 2,054.50	\$ 4,030.50		600.00	100.00	45.00	30.00	100.00	20.50	625.00	1,050.00	860.00	\$ 600.00		\$ 6,085.00		2020	Annual			
		\$ 3,200.00	3,200.00	0			\$ (3,607.00)		\$ 3,930.00	400.00	300.00	100.00	500 00	200.00	700.00	420.00		450.00	400.00	360.00	100.00		\$ 323.00	\$ 3,942.00		300.00	200.00	100.00	30.00	100.00	12.00	690.00	1,050.00	860.00	\$ 600.00		\$ 4,265.00		2021	Annual			
		\$ 2,492.06	2,492.06	0			\$ (3,587.00)	11	\$ 4,780.00	500.00	300.00	100.00	500.00	200.00	620.00	550.00	650.00	500.00	400.00	360.00	100.00		\$ 1,193.00	\$ 4,457.00		600.00	250.00	120.00	30.00	100.00	12.00	750.00	1,050.00	945.00	\$ 600.00		\$ 5,650.00		2022	Annual			

St. Louis Astronomical Society Devoted to the Interest and Advancement of the Science of Astronomy Executive Board Meeting Minutes 10/7/2021

1. Opening Activities

a. Attendance: Jim Small, Bill Winningham, Larry Campbell, Brent Buch, Mark Jones, John Newcomer, Cook Feldman

b. Open Meeting: meeting opened at 7:03pm

c. Approval of last month's meeting minutes. Motion by Brent second Bill W. Minutes approved with

d. Next Board meeting date: Dates for 2021: Nov 4, Dec 2. Meetings will be via Zoom until further notice:

2. Upcoming General Membership meeting topics:

a. **Speaker**: Jeffery Gillis Davis from Wash U. topic will be Moon b. Special Awards needed: none

c. Speaker Press Release: still in work, Rich H working on that

d. Special Business needed: October attendance prizes

e. A101: Mark J - Observatory and Loaner Scope Program, New member Chat meetings via Zoom, Orienteering (Babler, Stacy, JCO)

3. SLAS Financial Report (as of 9/30/21)

a. Balance Sheet Added MSRAL 2022; and Observatory Cost and depreciation. Total asset \$83.6K. Cook recommends separating dome from telescope.

b. Profit/Loss report - \$1515 sales on scopes, star party donations \$790,

c. Annual Budget meetings – next meeting is Oct 10 4pm, at Youngs d. Corporate filings (N990 form, Corp State, Insurance, ALCOR dues): done in August

4. Speaker Committee

a. Budget - \$400, balance \$394

b. Upcoming speakers:

SLAS Monthly Meetings

Presentations	0	
Month	Name Sponsor	Торіс
15-Oct-2021	Jeffery Gillis Davis Wash U	Moon
19-Nov-2021 17-Dec-2021	Jon Lomberg, Nick R) Scott Roberts	Voyager
21-Jan-2022	Explore Scientific Stephen Hummel McDonald Observatory	3 possible topi

c. Open dates for 2022 all but Feb,

d. Topics of interest James Webb Space Telescope, Event Horizon Katie Bouman

e. Stipends. None planned, there will be mailing cost for coffee mugs sent to speakers

f. Travel

5. Membership Initiatives

- a. Budget \$450, balance \$159
- b. Welcome Aboard Meetings Member Chat
- c. Raffles
- d. Attendance prizes this month Equinox door prizes

6. Membership Recognition

a. Total Budget \$420, balance \$69

b. NSN Outreach Awards: Pins have been announced

c. Membership Report: September 2021 membership report showing an increase in our membership to 233 members in large part due to an increase in family memberships.

d. Member anniversary awards – Scheduled for November meeting e. New Award program - \$600 budget

1. Special Award Committee report: Chairman – Larry Campbell, Jim Small, Mark Jones, Cook Feldman, Sharon Bertram, Fred Schovanez, Bill Neubert

2. New Award Policy and nomination process -

3. Submittal deadlines

- 4. Nomination reviews: next meeting will be Oct 25th Zoom, 7pm
- 5. Award selection:
- 6. Plaques purchased:
- 7. Awards presented:

7. Outreach -

- a. Budget \$700, balance \$676
- b. Member Training Program Status: on hold for the time being.
- c. Purchase of T-shirts for volunteers completed training
- d. Purchase of lawn signs:
- e. Upcoming outreach events:

f. Awards/recognitions Mark to send NSN message about upcoming events and qualifying for NSN pins

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g. NSN Outreach hours 375hours

8. Old Business:

a. Training Program start a committee

9. New Business:

10. Other Committee Reports: If needed

MSRAL 2022: Set and approve dates for the convention. Tentative dates will be June 10-12 at Washington University. In the process of contacting professors at Washington University now for coordinating use of facilities on campus for the meetings. First committee meeting took place Wed October 6. Next meeting Oct 20th

A. SLSC Business:

- a. First Friday actions: typically 5-9pm
- b. Other immediate business
- **B. SLCL Business:**
- a. Annual contract up to 4 events by R Heuerman
- b. Upcoming events –
- C. Jefferson College Business:
- a. Committee Meeting report:
- b. Upcoming Outreach Event: Jefferson Leader Event planned for Oct 8
 - l ihrem Teleses
- **D. Library Telescope Committee** a. Budget – \$300, balance \$235
- a. Budgel \$300, balance \$235 A Uncoming builds or maintonance over
- b. Upcoming builds or maintenance events. Oct 23rd, 9am, Don Fick-

en's house

- c. Maintenance budget \$100
- d. Mileage re-imbursement see above
- e. Promotional materials \$200

E. SLAS Social Events

- a. Budget \$300, balance \$99
- b. Homemade Fest \$100 budget
- ics c. Star-B-Q \$200 budget, balance \$0

Other F. SLAS Brochures

- a. Budget \$200, balance \$200
- b. Quarter cards, next updates should include Observatory

G. Loaner scope Program

- a. Budget \$100, balance \$100
- b. New donations,
- c. Replacement Parts for the LPTs -

d. Items for sale several: Jim has several telescopes and tripods, Mark has couple of telescopes

H. SLAS Library

- a. Budget \$500, balance \$133
- b. Other –
- I. Merchandise

J. Telescope Making

- New member is grinding his own 10" mirror
 - K. Newsletter
- a. Budget \$600, balance \$40 over budget need to be allocate to brochures
- L. Website
- a. Budget \$690, balance \$450
- M. Social Networking
- N. Night Sky Network
- O. SLASdialogs
- P. Dark Site
- Q. Observing Programs
- **R. Star Parties Donation:** star party donations \$790 **11. Closing Activities**

Brent to adjourn, John second, meeting adjourned at 8:47pm

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St. Louis As Profit & Loss January thr		s. Actua	ıl	St. Louis Astronor Balance S As of October	Sheet	ety
	Jan - Oct 21	Budget	\$ Over Bud		51, 2021	
Ordinary Income/Expense					Dec 31, 20	Oct 31, 21
Income Events Income	1,515.00		1,515.00	ASSETS		
Magazine Subscription	3,000.35	1,968.20	1,032.15	Current Assets		
Membership Dues	4,635.00	3,810.00	825.00	Checking/Savings	7,587.88	7,182.20
Total Income	9,150.35	5,778.20	3,372.15	Checking - First Bank Deposit, Certificate of	15,925.53	15,945.74
Cost of Goods Sold Magazine Subscriptions	2,962.05	1,968.20	993.85	Library Telescope Escrow	1,206.41	940.57
Merchandise	85.92			PayPal Savings - First Bank	814.52 41,145.74	14.61 41,148.82
Total COGS	3,047.97	1,968.20	1,079.77			
Gross Profit	6,102.38	3,810.00	2,292.38	Total Checking/Savings	66,680.08	65,231.94
Expense 1-Programs & Events 2-Newsletter 3-Library expense	1,336.56 640.02 366.70	2,607.00 530.00 400.00	(1,270.44) 110.02 (33.30)	Other Current Assets Inventory Asset Investment in Mid-States 2 Undeposited Funds	761.53 0.00 0.00	675.61 2,000.00 25.00
4-Astronomical League D 5-Loaner Scopes 6-Brochures 7-Insurance 8-Website 9-Administrative Expenses	955.00 1,049.50 239.39 398.06	860.00 100.00 250.00 1,050.00 690.00 394.00	95.00 (100.00) (250.00) (0.50) (450.61) 4.06	Total Other Current Assets Total Current Assets Fixed Assets	761.53 67,441.61	2,700.61 67,932.55
Total Expense	4,985.23	6,881.00	(1,895.77)	Accum Depr - Office Equp	(216.65)	(216.65)
Net Ordinary Income	1,117.15	(3,071.00)	4,188.15	JC Scope and Obervatory Office Equipment	15,336.00 216.65	16,613.74 216.65
Other Income/Expense Other Income Donations	994.92		994.92	Total Fixed Assets	15,336.00	16,613.74
Interest Income	23.29	42.00	(18.71)	TOTAL ASSETS	82,777.61	84,546.29
LTP Receipts	3,056.65		3,056.65	LIABILITIES & EQUITY		
Total Other Income	4,074.86	42.00	4,032.86	Equity	8,497.66	8,497.66
Other Expense LTP Disbursements	3,423.33		3,423.33	Opening Bal Equity Retained Earnings Net Income	72,581.69 1,698.26	74,279.95 1,768.68
Total Other Expense	3,423.33		3,423.33			
Net Other Income	651.53	42.00	609.53	Total Equity	82,777.61	84,546.29
Net Income	1,768.68	(3,029.00)	4,797.68	TOTAL LIABILITIES & EQUITY	82,777.61	84,546.29

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

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

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

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

Send to newsletter@slasonline.org

SLAS MEMBERSHIP APPLICATION T. LOUIC Name: Last First, Middle Initial Address City, State, Zip Code email address Please send completed form with check (no cash please) made payable to Youth @ \$10.00 / 1 year (18 yrs or younger) \$ St Louis Astronomical Society Individual @ \$25.00 / 1 year \$ Don Ficken, Membership 13024 Barrett Crossing CT Family @ \$40.00/1 year \$ St. Louis, MO 63122 Publications with discount available with your SLAS membership: Sky and Telescope @ \$43.95 / 1 year \$ (S&T may also be renewed at their website: http://www.skyandtelescope.com) Check all that apply: Renewal Astronomy @ \$34.00 / 1 year \$ Address Change Only **TOTAL ENCLOSED** Please send my newsletter by regular mail New Member! SLAS OFFICERS **COMMITTEE CHAIRS** President Jim Small 314-307-0692 president at slasonline.org Dark Site Coordinator Mark Jones 636-394-2342 Vice President Bradley R Waller 314-481-72 vicepresident at slasonline.org Secretary Mark Jones 636-394-23 secretary at slasonline.org Treasurer Bill Winningham, (Don Ficken - members treasurer at slasonline.org 636-357-2 Hospitality Larry Campbell 636-244-2 hospitality at slasonline.org Board Members at Large: John Newcomer 314-496-4 board22 at slasonline.org Tom Nickelson 314-346-9 board23 at slasonline.org **Brent Buch** 314-239-03 board24 at slasonline.org

ALCOR Bill Winningham (Astronomical League Correspondent) 636-357-2 treasurer at slasonline.org MSRAL Rep. Jim Small 314-909-7 msral_rep at astroleague.org

7250	darksite at slasonline.org	030-394-2342
2342	Librarian Jim Small librarian at slasonline.org	314-909-7211
ship)	Library Telescope Program Don Ficken librarytelescope at slasonline.org	636-851-9630
2763	Loaner Equipment Greg Gaines	314-277-3082
2867	Merchandise Vacant merchandise at slasonline.org	
	Membership Don Ficken membership at slasonline.org	636-225-0269
4636	Newsletter Editor Jim Small newsletter at slasonline.org	314-909-7211
	Observing Programs Mark Jones	636-394-2342
9565	observing at slasonline.org Publicity Rich Heuermann	314-962-9231
0329	publicity at slasonline.org <u>Recognition</u> Larry Campbell recognition at slasonline.org Social Media Vacant	636-244-2867
	'SLASdialogs' Moderator Mark Jones, F	Rhonda Whelan
2763	dialogsmoderator at yahoo.com <u>Star Party Coordinator</u> Bill Breeden starparty at slasonline.org	314-276-3613
7211	Telescope Making Bill Davis, Jim Melka telescope at slasonline.org	314-469-3061
	Webmaster Jim Small webmaster at slasonline.org	314-909-7211

Devoted to the Interest and Advancement of the Science of Astronomy

ST. LOUIS ASTRONOMICAL SOCIETY



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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.

