Astrophotography:
Pro Results Using
Amateur Tools

by

Dan Crowson

Astrophotographer Dan Crowson will be featured at the January meeting of the St. Louis Astronomical Society. The meeting will begin at 7:30 PM Friday, January 17, in McDonnell Hall, Room 162, on the Washington University campus, Saint Louis, MO 63130.

Photographing objects in the night sky is a challenging activity. Most astronomical objects are quite dim, so just finding them in a telescope can be difficult. Then the Earth’s spin puts the sky in constant motion, so keeping the object in view can be difficult. But advances in telescope and imaging technology make it possible for amateur astronomers to meet the challenges and achieve professional results. Dan Crowson is well known for his astrophotography. His images have been featured on NASA’s Astronomy Picture of the Day web site, as well as in several magazines. Mr. Crowson will use a workshop-demonstration approach to show how to produce high quality astronomical images with modest equipment, using readily available image processing software.

February meeting: Grant Martin and Bill Biermann - Archaeoastronomy
March meeting: Matthias Beilicke - Gamma Ray Astronomy
April meeting: Bob Criss - Rotational Dynamics of Planets, Stars and Galaxies
May meeting: Pamela Gay - Topic TBD

John Dobson had to make a decision, help a friend make a telescope and get kicked out of the monastery, or leave things be. Fortunately for amateur astronomers everywhere, he got kicked out of the monastery. Ever since, John was involved in helping people make telescopes and doing all he could to help people to see the universe. He organized the Sidewalk Astronomers in 1968 after spending every clear evening at the corner of Jackson and Broderick in San Francisco showing anyone who passes by the universe. He insisted that “of course everyone wants to borrow the telescope” and look through it because it is the only way most people ever get a chance to look at the universe. One person asked him if

(Continued on page 2)
President's Corner
by Jim Small

THANK YOU so much for all the members who volunteered at outreach events this past year. Night Sky Network pins have been ordered and we will celebrate those that volunteered at the February meeting. I can’t state enough how much we appreciated those that give their time so others may see the universe!

Homemade Fest will be held on March 22nd at the Kirkwood Community Center this year. Kirkwood Parks has generously provided us a room to hold the event free of charge because of the star parties we are providing them over the course of the year.

We will be dedicating this year’s event to John Dobson, in honor of all he did to promote astronomy and the building of telescopes. Several members of SLAS attended classes he taught and ground their own mirrors. You can get a snapshot of his life in this YouTube video biography. Steve Sands may be seen in one of the shots of the mirror class. http://www.youtube.com/watch?v=ght_w7BAHAA#t=330

MSRAL 2014 is coming along very well. The next committee meeting will be a big one and is scheduled for Sunday, January 26th at 6:00 pm at Young’s Restaurant in Valley Park at 141 and Marshall just north of the railroad tracks. This is an important meeting and we will be organizing volunteers and working out the scheduling details for the convention.

Costs will be as follows as of this writing (subject to changes). Registration: $30, StarBQ: $25, Saturday lunch: $12, Banquet $40. Coffee and a light continental breakfast will also be provided for both Saturday and Sunday. Rooms will be available at the Knight Center for $99 plus tax. Not all of the speakers are established at this point, so if you have a paper to present or a speaker to suggest, contact myself or Mark Jones.

The order for the equipment for helping disabled people use a telescope will take place this month and we will hopefully be able to put it to use this spring.

We have a great talk from Dan Crowson slated for this month. If you haven’t seen his work, don’t miss this meeting as he is doing spectacular work!

If you have photos, stories, etc of John Dobson you would like to share, please get them to me before the meeting tomorrow and I’ll try to get them assembled into a presentation for the meeting tomorrow. You may forward them to president@slasonline.org

We’ll see you Friday night!

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Dobson

it was a study he was doing when his 24” was pointed at the Moon and he said “no, it’s a study that YOU are doing” At our 75th Anniversary Celebration, John said “When I was a kid, it was nearly hopeless for anybody to get a chance to see through a telescope. Now it’s easy. Getting telescopes out to the public had to be done. Somebody had to do it, and I’m not sorry that I did it.” When we told him our club was 75 years old, he responded “well that’s just a kid” John said that his favorite experience was a three night star party in Bryce Canyon. With 100 or so telescopes at the ready in the parking lot, the public was held to listen to a one hour lecture first, then at 9 o’clock, was released to head for the telescopes. They were told what telescope to visit if they wanted to see a particular object until a particular time. After that time, the telescopes were released to view whatever they wanted. At 1 am, the lights were turned on and everyone drove home. John gave the lecture the middle evening.

“You see the importance of a telescope is not on how big it is, it is not on how well made it is, it’s how many people, less fortunate than you, got to look through it”

“But if the amateurs do not solve the problem of making it possible for the public to have a look at this universe, nobody will solve that problem. The professionals cannot solve that problem. So if the general public is to see what the universe looks like, they are going to have to do it through telescopes, they’re going to have to do it at night, and they are going to have to do it through amateur telescopes, there is no other way. So if you see, there were something like a million sidewalk astronomers worldwide, by “sidewalk astronomers” I simply mean people that are willing to get their telescopes out and let the other people use or look through them, If there were a million such people and a few thousand people looked through each telescope, there would be a chance for most of the people who live on this world who want to see, to see.”

John Dobson built a 24” telescope in a 30” concrete form (which slept 3 people on two occasions before it was ruined in the rain) which followed behind John’s bus to the National Parks “because that’s where the people are.” He put in more than 80,000 miles of travel with that scope and others and millions of people got to look through his telescopes. John Dobson was a friend inspiration to all and the all-time champion Sidewalk Astronomer. We can carry on his mission by letting as many people as possible view through our telescopes and inspiring them to wonder about their uni-
2013 Year in Review

Looking back at 2013, SLAS had another action-packed year. SLAS member participated in more than 50 events during 2013. These included public star parties and SLAS private functions such as monthly dark sky viewing, and the annual Star-B-Q and Homemade Fest. Here is a chronological review of some of those events.

Feb 16, 2013 - Homemade Fest
McDonnell Planetarium

Since 2001, SLAS has held the annual Homemade Fest dinner, where SLAS members enjoy a potluck dinner and presentations by fellow members. The 2013 event was held in the Mission Control room at the McDonnell Planetarium. About 30 members were in attendance.

April 20, 2013 Astronomy Day
at McDonnell Planetarium

Larry Campbell manning one of 3 tables of exhibits set up by SLAS. More than 2500 people visited the Planetarium during the day. The SLSC and SLAS gave away 7 telescopes as attendance prizes.

May 16-18, 2013 – Mid-States Regional Convention
Omaha Nebraska

SLAS members attending the 2013 MSRAL convention. The 3-day event featured a public telescope viewing, tours of the Strategic Air Museum and talks by local amateurs. SLAS will host MSRAL2104 June 6-8. SLAS members have been attending the MSRAL since its inception in 1950 and hosted the event in 1952, 1960, 1964, 1968, 1971, 1976, 1984, 1990, 1997 and 2006. SLAS is the host again this June in 2014.

July 19, 2013 – I Waved at Saturn,
Washington University

After the July SLAS meeting, members got together for a group photo to wave at the planet Saturn as the Cassini spacecraft photographed Earth. This was a NASA sponsored activity, and SLAS posted their photo on the NASA website along with thousands of others.

(Continued on page 4)
**Astronomical Events for 2014**  
by Mark Jones

2014 will offer St. Louis observers a variety of Astronomical events.

As the year begins, Jupiter will reach opposition in January, followed by Mars in April and Saturn in May. Mars will reach a size of 15 arc-seconds at opposition. Venus will be a morning object most of 2014, reaching greatest elongation from the Sun in March. Neptune and Uranus reach opposition in August and October respectively.

The showpieces of the year will be three eclipses. On April 15th the Moon will be totality eclipsed just after midnight. In October the Moon and Sun will have eclipse. The solar eclipse will be partial at sunset and is the last one visible from St Louis until the Total Solar Eclipse in 2017. A separate article about these eclipses will be published in separate Event Horizon article.

The Moon will be in close conjunction with several objects in 2014, including Venus, Mars, Jupiter, Saturn, Spica, and Aldebaran. Notable will be the occultations of Lambda Gemini in March, the Hyades cluster in April, and Saturn in August. Observers with DSLR or video cameras may be able to capture the Moon occulting these objects.

Other lunar photo opportunities include the smallest Full Moon of the year on January 16th and the largest, “Super Moon”, on August 10th. Also the transient “Lunar-X” might be visible for 3-4 hours in the evenings of Aug 2nd, September 30th and December 28th.

The two brightest asteroids, Vesta and Ceres will remain close together most of the year and reach opposition in April. In July Ceres and Vesta will form a 0.2 degree pairing. Since both can be photographed with a tripod mount camera, this would be a very good opportunity to capture their motion during July.

Meteor showers occur throughout the year. Most showers have predictable rates, however two showers this year may offer surprises. On January 12th there could be a brief shower as the Earth passes through remains of Comet ISON’s debris. On May 23rd the Camelopardalis meteors associated with Comet 209P/Linear may generate a burst around 2am.

This list below identifies some of the most interesting events for 2014. In some cases, times for the event, altitude of the event above the horizon is also given if critical for viewing location.

<table>
<thead>
<tr>
<th>2014 Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Jan</td>
<td>Jupiter at Opposition. Mag= -2.7; dia= 46.7 arc-sec</td>
</tr>
<tr>
<td>2-Jan</td>
<td>Quadrantids Meteor Shower.</td>
</tr>
<tr>
<td>3-Jan</td>
<td>Mars at Aphelion</td>
</tr>
<tr>
<td>12-Jan</td>
<td>Possible Comet ISON Meteor Shower.</td>
</tr>
<tr>
<td>16-Jan</td>
<td>Smallest Full Moon of Year, dia= 29.8 arc-min</td>
</tr>
<tr>
<td>23-Jan</td>
<td>Spica 1.3 deg S of Moon, 5am, Alt=36 deg.</td>
</tr>
<tr>
<td>25-Jan</td>
<td>Saturn 1deg N of Moon. 5am, alt=26 deg.</td>
</tr>
</tbody>
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THE EVENT HORIZON

6-Feb Jupiter Double Shadow Transit
9-Mar Daylight Saving Time Begins
9-Mar Jupiter Double Shadow Transit
10-Mar Moon Occults Lambda Gem (mag=3.6) at 9:59pm, Alt=56 degrees. Reappearance at 11:15pm
16-Mar Jupiter Double Shadow Transit
18-Mar no good
20-Mar Mars Equinox
22-Mar Venus Greatest Elongation Morning Sky
23-Mar Jupiter Double Shadow Transit (Io and Ganymede)
8:10CDT

3-Apr Moon in Hyades Cluster, 8pm Alt=30deg, multiple occultations
8-Apr Mars at Opposition. (mag=1.5, dia=15 arc-sec)
13-Apr Vesta at Opposition (mag=5.7, dia=0.56 arc-sec)
14-Apr Mars Closest to Earth
15-Apr Total Lunar Eclipse. Partial start=12:58amCDT, Alt=40 deg; Total start=2:06am; total end=3:25amCDT; Partial end=4:33am, Alt=20 deg
15-Apr Ceres at opposition (mag=7, dia=0.77 arc-sec)
17-Apr Saturn N of Moon, 11pm Alt=22 deg.
22-Apr Lyrids Meteor Shower
5-May Eta Aquarids Meteor Shower.
10-May Saturn at Opposition. (mag=0; rings 22 deg, dia=18.6 arc-sec)
10-May Astronomy Day
12-May Moon between Spica and Mars, 11pm Alt=35 deg.
13-May Jupiter Double Shadow Transit
14-May Saturn N of Moon, 3am, Alt=20 deg.
16-May Uranus 1 deg N of Venus
17-May Jupiter Double Shadow Transit
20-May Jupiter Double Shadow Transit
23-May Camelpopardalis Meteor Shower associated with Comet 209P/Linear. 2-3am CST
27-May Jupiter Double Shadow Transit
3-Jun Jupiter Double Shadow Transit. (Callisto, Europa, Ganymede)
7-Jun Mars 2 deg N of Moon at Sunset
10-Jun Jupiter Double Shadow Transit
21-Jun June Solstice
23-Jun Venus 5 deg S of Pleiades, 5am, Alt=22 deg.
24-Jun Venus 2 deg N of Moon, 5:30am, Alt=30 deg.
5-Jul Mars 0.25deg S of Moon, 7:30pm Alt=40deg.
7-Jul Saturn 1 deg N of Moon, 7:30pm, Alt=35 deg.
7-Jul Ceres and Vesta Conjunction 0.2 degs, 10pm, Alt=20 deg
13-Jul Mars 1 deg N of Spica
28-Jul Delta Aquarids Meteor Shower.
2-Aug 11:50pm. Lunar-X Visible on Moon about 4 hours around this time
3-Aug Moon between Mars and Saturn, 7:30pm, Alt=32 deg.
10-Aug Full Moon. Super Moon. Biggest of Year, 11pm, dia=33.82 arc-min
12-Aug Perseids Meteor Shower
18-Aug Venus 0.2deg N of Jupiter and 1 deg from Beehive Cluster, 4:30am, Alt=7 deg.
18-Aug Venus 1deg S of Beehive, 4:30am, Alt=7 deg.
18-Aug Conjunction of Venus and Jupiter. (1/4 deg), 4:30am, Alt=7 deg.
23-Aug Moon-Jupiter-Venus Conjunction, 3:30am, Alt=10 deg.
24-Aug Mars 3 deg S of Saturn
29-Aug Neptune at Opposition 9mag=7.8, dia=2.4 arc-sec
31-Aug Saturn Occultation with Moon, Reappearance 11am, Alt=10 deg.

5-Sep Venus 0.8 deg N of Regulus, 4am, Alt=5deg
9-Sep Full Moon. Super Moon
23-Sep September Equinox.
28-Sep Mars 3deg N of Antares
28-Sep Jupiter Double Shadow Transit
30-Sep 11:50pm. Lunar-X Visible on Moon about 4 hours around this time
4-Oct Ceres 0.5deg S of Saturn, 6pm Alt=5 deg
7-Oct Uranus at Opposition (mag=5.7, dia=3.7 arc-sec)
8-Oct Moonset Eclipse. Total Lunar Eclipse. Partial start=4:14amCDT, Total start=5:24am; total end=6:26amCDT; Moon sets=7:07am; Partial ends=7:35am
8-Oct Draconids Meteor Shower
12-Oct Aldebaran S of Moon, 5am, Alt=50 deg
22-Oct Orionids Meteor Shower
23-Oct Sunset Eclipse. Partial Solar Eclipse. Start=4:48pm, Alt=16 deg; max=5:48pm, Mag=0.505; Alt=4deg
2-Nov Daylight Saving Time Ends
5-Nov Leonids Meteor Shower.
14-Dec Taurids Meteor Shower
17-Nov Leonids Meteor Shower.
1-Dec Aldebaran S of Moon, 5pm, Alt=35deg.
5-Dec Aldebaran S of Moon, 8pm, Alt=50deg
8-Dec Jupiter Double Shadow Transit (Io and Europa) 10:18pm
CST
12-Dec Jupiter Double Shadow Transit
13-Dec Geminids Meteor Shower.
15-Dec Jupiter Double Shadow Transit
21-Dec December Solstice
22-Dec Ursids Meteor Shower
28-Dec 7:20pm. Lunar-X Visible on Moon about 4 hours around this time

Globe at Night Campaign Dates for 2014 from Constance E. Walker (NOAO & GLOBE at Night Campaign Director www.globeatnight.org )

The Globe at Night (http://www.globeatnight.org/) program is an international citizen-sciences campaign to raise public awareness of the impact of light pollution by inviting citizen scientists to measure their night-sky brightness and submit their observations (at http://www.globeatnight.org/webapp/) from a computer or smartphone. Light pollution threatens not only our "right to starlight," but also can adversely affect energy consumption, wildlife, and health. Nearly 100,000 measurements have been contributed from people in 115 countries during the campaigns over the last 8 years, making Globe at Night the most successful light-pollution-awareness program to date. For 2014 Globe at Night offers four ways to measure night-sky brightness: the traditional method of matching what you see in a constellation with star charts; the use of a handheld digital device called a Sky Quality Meter (http://unihedron.com/projects/sqm-l/); the use of the Loss of the Night app on Android phones (https://play.google.com/store/apps/details?id=com.cosalux.welovestars&hl=en), which asks you to find certain stars as a measure of star visibility; or the use of the Dark Sky Meter app on iPhone 4s and iPhone 5/5s/5c (http://www.darkskymeter.com/), which uses the phone's...
camera to measure night-sky brightness. Explore the last 8 years of data in our interactive map (http://www.globeatnight.org/map/), or see how your city did with our map app (http://www.globeatnight.org/mapapp/). The Globe at Night website is easy to use, comprehensive, and holds an abundance of background information. The database is usable for comparisons with a variety of other databases, such as how light pollution affects the foraging habits of bats.

For 2014, we will be collecting observations during particular dates each month, roughly between 8pm-10pm local time, when the Moon is not up. Those dates are:

- January 20-29
- February 19-28
- March 21-30
- April 20-29
- May 19-28
- June 17-26
- July 16-25
- August 15-24
- September 15-24
- October 14-23
- November 12-21
- December 11-20

We look forward to your participation in the campaign! Visit www.globeatnight.org for more information.

**Winter has just started, but are you going a little stir crazy and need some sky viewing?**

The Pattonville Observatory has an 10-inch Schmidt-Cassgrain telescope which is used to view planets, stars, nebulae, galaxies and globular clusters. Approximately two Fridays every month during the school year in the early evening after sunset. Please see the Pattonville Announcements page and the Calendar page for details.

**Where:** The white dome atop Pattonville Heights Middle School located at 195 Fee Fee Rd., Maryland Heights, MO 63043. Please enter the door directly below the dome. Click on this link to obtain a map

**Cost:** Totally and completely Free!!

What if it is cloudy? In the event of rain or clouds, they also have a fully functional planetarium and substitute a planetarium program instead. The planetarium is located at the opposite end of the building from the blue dome but all you need do is follow the signs inside the building. The planetarium is a small theater with seating for 25 around a Spitz projector which illuminates a 360 degree hemispheric screen overhead.

**Upcoming Dates to Mark on Your Calendar**

**Pattonville Observatory**

- January 10, 2014 Friday 7:00-9:00 p.m. Public Program
  Half Moon, Jupiter, Uranus, Star Birth Factories (M42), Clusters (M45), Charles Messier, star colors,
- January 31, 2014 Friday 7:00-9:00 p.m. Public Program
  Jupiter, M44, M36, M37, Charles Messier, Orion, Taurus and Auriga, Pleiades, M42, star colors, star clusters
- February 7, 2014 Friday 7:00-9:00 p.m. Public Program
  Half Moon, Jupiter, Celestial Hexagon, M44, M45, Star life cycles, star colors, variable stars
- February 21, 2014 Friday 7:00-9:00pm. Public Program
  Jupiter, M45, M44, Star colors, brighter winter constellations
- March 7, 2014 Friday 7:00-9:00 p.m. Public Program
  Quarter Moon, Jupiter, celestial hexagon, M42, star birth, star life cycle, star colors
- March 21, 2014 Friday 8:00-10:00 p.m. Public Program
  Jupiter, celestial hexagon, M45, M44, Mizar (Double Star)
- April 4, 2014 Friday 8:30-10:30 p.m. Public Program
  Small Crescent Moon, Jupiter, Saturn and Mars (late), M44 (the Beehive Cluster), M45 (the Pleiades), Mizar, stars and star colors
- April 25, 2014 Friday 9:00-11:00 p.m. Public Program
  Jupiter, Saturn, Mars, M104 (Sombrero Galaxy), M96, M44, Double Stars and various constellations
- May 2, 2014 Friday 9:00-11:00 p.m. Public Program
  Jupiter, Saturn, Mars, M104, M96 and globular cluster of M3 and M5, open cluster of M44
- May 16, 2014 Friday 9:00-11:00 p.m. Public Program
  Jupiter (early), Saturn, Mars, M13 (the Great Hercules cluster), M104, M96, globular clusters, constellations and stars

**Eclipses for 2014**

*by Mark Jones*

2014 will offer St Louis with three eclipse opportunities, two lunar, and one solar.

**April 15: Total Lunar Eclipse**

This is the first total lunar eclipse visible in St Louis since December 10, 2011. April's event is observable across North America. It's an early-morning event as the Moon
skims though the Southern portion of the Earth’s shadow. This means that the southern portion of the Moon will be brighter than the northern part. The star Spica will be just 2 degrees west of the Moon. This should be an excellent visual and photo opportunity.

Partial phase starts at 1:00am, with the Moon, due south and 40 degrees above the horizon. Totality begins at 2:06am and ends at 3:25am. When Totality ends, the Moon will be 30 degrees high in the southwest. Partial phase ends at 4:33am with the Moon 20 degrees high in the southwest.

Photo: The last Total Lunar Eclipse seen from St. Louis, on Dec 10, 2011

October 8: Total Lunar Eclipse

The year’s second lunar eclipse will also be a morning event. This time, closer to sunrise, which means the Moon will be very low in the southwest.

The Moon skims though the northern portion of the Earth’s shadow. This means that the northern portion of the Moon will be brighter than the southern part.

Partial phase starts at 4:14am, with the moon 31 degrees high in the southwest. Totality begins at 5:24am with the Moon 18 degrees high. The planet Uranus will be 1 degree to the east of the Moon. By the time Totality ends at 6:24am, the Moon will be 8 degrees high above the western horizon. The Moon will set at 7:07am before the Partial phase ends at 7:35am.

You will need an extremely good southwest horizon. On Dec 10, 2011 several SLAS members set up on the parking deck at West County Mall to view the Moon and it set while still eclipsed.

October 23: Partial Solar Eclipse

The last Solar eclipse visible from St. Louis was on May 20, 2012. However the weather was terrible in St. Louis that day and the eclipse was not observed for any length of time.

Prior to 2012, there was a “tiny” eclipse in 2005 with only 1% of the Sun obscured by the Moon. You need to go back to June 10, 2002 for the last “good” Solar eclipse visible from St Louis. Like the 2002 event, the 2014 eclipse will be at sunset.

Let’s hope the weather cooperates because this is our final trial run for solar eclipses until the Total Solar Eclipse visible in St Louis on Aug 21, 2017! So get your equipment ready, buy your solar filters and viewing glasses now.

The partial phase starts at 4:48pm with the Sun only 16 degrees above the southwest horizon. Maximum eclipse at 5:48pm with the Sun only 4 degrees above the horizon, so find a site with a flat horizon. At that time, 51% of the Sun’s diameter will be obscured. The Sun will set at 6:07pm with the eclipse still underway just like in 2002

Photo: June 10, 2002 eclipse as seen from Chesterfield Mall parking lot as the Sun set over St. Charles County.
Homemade Fest 2014
Saturday March 22, 2014
Kirkwood Community Center

Join fellow SLAS members for our annual winter pot-luck dinner meeting. Doors open at 5pm to unload equipment and food. We will begin eating at 6pm. Formal Opening and presentation begin at 6:45pm.

This is a show-n-tell meeting. Members are encouraged to present anything of astronomical interest they have built, refurbished, improved or just can’t do without. This is your chance to share with your fellow SLAS members.

SLAS will provide the soda, coffee and paper goods. So bring a favorite dish or dessert to share and let’s enjoy each other’s company and love for Astronomy on this long winter’s night.

Attendants prizes will be drawn throughout the evening.
If you have questions or wish to present, please contact Mark Jones for more information. This event is free to all SALS members and their families. RSVP on SLAS Night Sky Network is optional but encouraged.
SAINT LOUIS ASTRONOMICAL SOCIETY
MINUTES OF EXECUTIVE BOARD MEETING:
December 12, 2013

1. Opening Activities
Meeting called to order at 7:10pm
Attendees: Jim Small, Larry Campbell, Tom Nickelson, Grant Martin, Brad Waller
Jim Small made motion to approve the November minutes and seconded by Tom Nickelson. Motion passed.

2. External Business
SLSC Next First Friday will be January 3rd.
MSRAL2014 Ad for MSRAL2014 placed on page 22 of the Reflector magazine. The MSRAL2014 webpage is active, suggested registration form created. Powerpoint created to publicize the weekend’s activities. The Star-B-Q menu is confirmed. Meeting with Bon Appetit next week.
Next MSRAL2014 committee meeting will be December 15, 6:00 pm at Young’s.
Need to add meeting dates to NSN calendar
Will present our plans at the ASEM meeting which is the second Saturday of the month, Jan 11th
Lunch menu still in process
Next board meeting January 9
Future board meeting dates: 2/6, 3/6, 4/10, 5/8, 6/12, 7/10, 8/7, 9/11, 10/9, 11/6, 12/11 are suggested. They still need to be confirmed for YMCA Check with Don Ficken for YMCA availability

3. Director Reports:
President – Jim S
No additional report
Vice President – Bill Biermann
Speakers: December Ed Guiness; January Dan Crowson, February Bill Biermann and Grant Martin December A101 Dale Engelbrect will present his binocular mount
Secretary – Mark J
Former SLAS member, Ernie Sciaroni passed away December 5th. A sympathy card will be sent from SLAS.
Treasurer/ALCor – Cook Feldman (acting)
Budget approval 2013 Balance sheet reviewed. Jan –Nov, expenditures are under budget for 2013. 2014 Budget worksheet was reviewed by Board and approved. Cook will prepare Budget narrative. Budget will be published in newsletter and put to a vote for approval at the December general meeting.

Hospitality – Grant M
Discussion on the need to purchase 2014 Budget for NSN pins. NSN will supply two free pins but others will cost $2 each. We have 15-20 members qualify for NSN pins for 2013. Estimate $40 is needed.
Budget for 2014 should cover cost of NSN pins under membership initiative or recognitions

Board Member at Large reports
Larry Campbell
Bought a 12” Skywatcher reflector and plan to use it at public viewing sessions
Tom Nickelson
Space Grant for people with disabilities. First round of equipment out for bid.
Request for quote sent to OPT for telescope, video eyepiece.
Will still need to procure carrying case and video monitor, easy arm, powerpack and accessory cables
Brad Waller
No report

4. Committee Reports: If needed
Membership – report was submitted prior to the meeting. Membership now at 153. This is down from last year’s 160.
Librarian – RASC handbook Ottwell calendar on order
Newsletter - deadline for articles is Saturday morning Dec 14th
Night Sky Network – write up suggestion for a pooled supply of recognition pins
Publicity – Rich H did send out press release for December meeting
Observing Programs - Sky Puppy award for Bill Biermann’s daughter Annalisse will be presented at the December meeting

5. Old Business
Discussion held about getting volunteers for star parties. We had to cancel some recent star parties because we did not have enough volunteers. Board decided to review upcoming events posted on NSN at each board meeting to verify volunteers are identified. December events was a short list and no shortages were identified.

6. New Business Any new business to bring before the board.
Membership committee is looking for names of members deserving of future recognition. Committee plans to present at SLAS meeting early in 2014.

7. Closing Activities
Motion to adjourn meeting by Grant Martin, seconded by Larry Campbell. Meeting adjourned at 9:00pm.
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 the Edward Jones YMCA
2/13/2014
3/6/2014
4/10/2014
5/8/2014
6/12/2014
7/10/2014
8/7/2014
9/11/2014
10/9/2014
11/6/2014
12/11/2014

Dark Sky Observing Dates

Francis Park Events: These events are on Wednesdays the week nearest the first quarter Moon
April 9 (9 day old Moon) (2nd Wed.)
May 7 (7 day old Moon) (1st Wed.)
June 4 (6 day old Moon) (1st Wed.)
July 2 (4 day old Moon) (1st Wed.)
August 6 (9 day old Moon) (1st Wed.)
September 3 (8 day old Moon) (1st Wed.)
October 1 (7 day old Moon) (1st Wed.)
October 29 (6 day old Moon) (5th Wed.)

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month -
*Planetarium shows start at 7pm for the summer months
January 3, 2014
February 7, 2014
March 7, 2014

YMCA Edward Jones Star Parties (dates are tentative at this time)
4/7/2014
5/5/2014
6/2/2014
6/30/2014 (two in June is because of Moon timing)
8/14/2014

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. For more information about events, such as Moon phase, clear sky clock, weather report or a map of what’s up, see the calendar online.

SLAS EVENTS

January
17 (FRI) SLAS Reg Meeting

February
6 (THUR) Woerther/Ballwin Science Night
7 (FRI) SLSC PTV
13(THUR) SLAS Board Meeting
20 (THUR) Incarnate Word Science Olympiad
21 (FRI) SLAS Regular Meeting

March
6 (THUR) SLAS Board Meeting
7 (FRI) SLSC PTV
8 (SAT) Kirkwood Park
14 (FRI) Creve Coeur Stargazing
21 (FRI) SLAS Regular Meeting
22 (SAT) HOMEMADE FEST !! (Kirkwood Community Center)

JUNE 6-8 Mid-States Region of the Astronomical League Convention

Volunteer Hours for Outreach. NSN pin awardees (5 or more outreach events)
Cook Feldman 26 events 93 hours
John Beaury 23 events 72 hours
Donald Ficken 22 events 65 hours
James Small 20 events 57 hours
Mark Jones 16 events 56 hours
Bill Breeden 13 events 37 hours
Jim Trull 13 events 39 hours
Grant Martin 12 events 41 hours
Rick Menendez 11 events 29 hours
Bill Biermann 8 events 26 hours
Larry Campbell 6 events 21 hours
Richard Jennings 6 events 19 hours
Ann Trull 5 events 16 hours
Connie Gleason 5 events 15 hours
Nathan Biermann 5 events 17 hours

Other Volunteers THANKS TO ALL VOLUNTEERS !!
Abby Gordon 4 events 11 hours
Daniel Corso 4 events 12 hours
Rita Breeden 4 events 14 hours
Lois Fitter 3 events 14 hours
Wayne Clark 3 events 10 hours
Joe McHugh 2 events 6 hours
Lee Halbeck 2 events 6 hours
Michael Malolepszy 2 events 10 hours
Paul Baldwin 2 events 9 hours
Beverly Wrobel 1 events 2 hours
Brent Buch 1 events 4 hours
Bryan White 1 events 3 hours
Dale Engelbrecht 1 events 3 hours
Doug Blum 1 events 4 hours
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 $____________
Astronomy @ $34.00 / 1 year $____________

TOTAL ENCLOSED $____________

Check all that apply:
___ Renewal
___ Address Change Only
___ Please send my newsletter by regular mail
___ New Member!

Please send completed form with check (no cash please) made payable to
St Louis Astronomical Society
Don Ficken, Treasurer
13024 Barrett Crossing CT
St. Louis, MO 63122

COMMITTEE CHAIRS

Membership  Don Ficken  636-225-0269
membership at slasonline.org
Publicity  Rich Heuermann  314-962-9231
publicity at slasonline.org
'SLASdialogs' Moderator  Mark Jones, Rhonda Whelan
dialogsmoderator at yahoo.com
Webmaster  Jim Small  314-909-7211
webmaster at slasonline.org
Newsletter Ed.  Jim Small  314-909-7211
newsletter at slasonline.org
Loaner Equip.  Greg Gaines  314-277-3082
loaner at slasonline.org
Merchandise  Grant Martin  314-909-7211
merchandise at slasonline.org
Librarian  Jim Small  314-909-7211
librarian at slasonline.org
Star Party Coord  Mike Malolepszy  314-781-4701
starparty at slasonline.org
Dark Site Coord.  Mark Jones  636-394-2342
darksite at slasonline.org
Observing Programs  Mark Jones  636-394-2342
observing at slasonline.org
Telescope Making  Bill Davis, Jim Melka  314-469-3061

SLAS OFFICERS

President  Jim Small  314-307-0692
president at slasonline.org
Vice President  Bill Biermann  314-596-6738
vicepresident at slasonline.org
Secretary  Mark Jones  636-394-2342
secretary at slasonline.org
Treasurer  Rhonda Whelan, Cook Feldman, Don Ficken
(membership)  636-225-0269
treasurer at slasonline.org
Hospitality  Grant Martin  636-225-0269
hospitality at slasonline.org
Board Members at Large:
Tom Nickelson  314-481-7250
board14 at slasonline.org
Vacant  314-481-7250
board15 at slasonline.org
Bradley Waller  314-481-7250
board16 at slasonline.org

ALCOR  Rhonda Whelan  314-750-0262
(Astronomical League Correspondent)
treasurer at slasonline.org
msral_rep at astroleague.org
ST. LOUIS ASTRONOMICAL SOCIETY

We’re on the Web!
http://www.slasonline.org

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

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

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

St. Louis Astronomical Society
Jim Small
13128 Cozyhill Drive
St. Louis, MO 63122