Rosetta at Comet 67P
by
Joseph Marcus, MD

Dr. Joseph Marcus, M.D., will be featured at the April meeting of the Saint Louis Astronomical Society. The event, cosponsored by NASA’s Missouri Space Grant Consortium, is open to the public free of charge.

Hailed by Science magazine as the 2014 "Breakthrough of the Year," the European Space Agency’s Rosetta spacecraft Rosetta is revolutionizing our understanding of comets. Aided by gravitational slingshot assists from Earth and Mars, the spacecraft reached its quarry and completed a ten-year, billion-mile journey to become the first to orbit, rather than to fly by, a comet comet 67P/Churyumov-Gerasimenko, in August, 2014. There it found a bizarre dust-covered world of pits, crevices, cliffs, cracks, boulders, "goosebumps," and even dunes. On November 12, Rosetta’s Philae lander was launched. The microgravity of this tiny 4-km bi-lobed comet proved quite a challenge to the lander, which bounced several times from an unexpectedly hard surface, finally coming to rest in a heavily-shadowed cliff region whose location is still unknown. But before it went to "sleep" after battery depletion, it returned stunning images and other data from the surface, and it may yet awaken. The Rosetta orbiter has continued to function, sending images and data 300 million miles back to Earth. A visit with the co-discoverer, Klim Churyumov, in Kyiv is recounted.

Dr. Marcus will describe the nature and origin of comets as well as examine the early results of the Rosetta mission. He will explain how the comet will change as it approaches its nearest distance to the sun next August, and what scientists hope to learn from the 17-month long Rosetta observations.

Dr. Marcus is an avid astronomer with particular interest in the study of comets. In addition to observing them, he was editor of The Comet News Service, a quarterly and special-edition publication of the McDonnell Planetarium in the mid-seventies and early eighties.

May - Kathrin Powell “All the Mars Rovers and Discoveries”
Elections are next month and we have nearly a full slate of nominations (still to be formally announced) for offices for next year. President-Jim Small, Vice President-Paul Baldwin, Secretary-Mark Jones, Treasurer-Bill Winningham, Hospitality-Larry Campbell. The only position we do not have a nomination for is Board Member at Large for a three year term. Obligations for this position include attending board meetings once a month (2 hours) and having fun at dinner beforehand at Balducci’s! (optional) It would be great to have someone step up at this month’s meeting for the position.

The build for the next phase of the Library Telescope program has been moved to April 25 at Parkway West High School. See the SLAS calendar to sign up. Speak to Don Ficken if you have questions!

The contest for designing a case for Library Telescopes is over with Frank Mack taking first place ($50 prize), Larry Campbell 2nd and Jim Small 3rd (SLAS 1 year memberships) Congratulations to all!

Neil deGrasse Tyson raffle tickets are still available. $2 each or 6/$10. See Brad Waller for details and tickets. The drawing for the raffle will take place at the April meeting.

We are ready to go for Astronomy Day at Kirkwood Library. It will be from 10-4 Saturday, April 25. RSVP on Night Sky Network if you plan to attend and let us know how long you can stay. It will be very similar to past Astronomy Days with solar viewing, tables for information and activities inside and prize giveaways including Galileoscopes and possibly a Celestron Telescope. There are many Star Parties and Events coming in the next two months. Please RSVP on Night Sky Network and be sure to show up if you RSVP. We need to know we can count on your to assist us at various events. Check the SLAS calendar and sign up! If you need help with the RSVP, please ask at the meeting and we can get you started. Also see the events page in this newsletter.

I won’t be joining you at this months meeting as I am headed for NEAF on Wednesday morning. Give me a call if you have small items you need me to pick up while I’m there! There are always lots of vendors with bins of everything you might need. We will see you in May both at the regular meeting AND at MSRAL!
Library Telescope Build Moved to April 25th

If you haven’t heard by now, the telescopes from Orion were delayed by a dock strike. As a result, the date for the build party at Parkway West has been moved from April 11 to April 25 (this Saturday). If you wish to help, be sure to RSVP on Night Sky Network and speak to Don Ficken about it. The build for this year will be for about 50 telescopes.

Observing Program Awards by Mark Jones

The Astronomical League offers several dozen observing program awards. Any member of SLAS and/or the Astronomical League is eligible to submit their application for these awards. The applications are submit by the SLAS Observing Chairman to the designated national coordinator for each program. The national program coordinator will review the application and determines if all criteria have been achieved. Two SLAS members have recently earned awards. On March 28th Grant Martin, was informed he has earned the second level Outreach Program Award. To earn this award Grant submitted a log with more than 60 hours of Outreach. In 2011 Grant earned the Basic Outreach award and now adds the Stellar level to his accomplishments. This is the 16th AL award for Grant. Congratulations to Grant. Jerry Loethen received his Southern Sky Telescopic Award on March 31st and the Southern Sky Binocular Award on April 6. To achieve these awards Jerry had to observe and submit logs for at least 50 objects on the Southern Sky lists. These are the 16th and 17th AL awards for Jerry. Congratulations to Jerry.

Outreach Volunteer Efforts in 2015 by Mark Jones

- In 2014, SLAS members volunteered for 72 events and logged 736.6 hrs for NSN events
- Since June 2007 SLAS members have logged 3900 hrs for NSN events
- So far through April 9, 2015, 40 SLAS members have logged more than 249 hours in Outreach activities!
- Thank you to all our volunteers!

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Brian Mills explains the operation of the Library Telescope at one of the staff training sessions for the libraries.
Is the Most Massive Star Still Alive?
by Ethan Siegel

The brilliant specks of light twinkling in the night sky, with more and more visible under darker skies and with larger telescope apertures, each have their own story to tell. In general, a star’s color correlates very well with its mass and its total lifetime, with the bluest stars representing the hottest, most massive and shortest-lived stars in the universe. Even though they contain the most fuel overall, their cores achieve incredibly high temperatures, meaning they burn through their fuel the fastest, in only a few million years instead of roughly ten billion like our sun.

Because of this, it’s only the youngest of all star clusters that contain the hottest, bluest stars, and so if we want to find the most massive stars in the universe, we have to look to the largest regions of space that are actively forming them right now. In our local group of galaxies, that region doesn’t belong to the giants, the Milky Way or Andromeda, but to the Large Magellanic Cloud (LMC), a small, satellite galaxy (and fourth-largest in the local group) located 170,000 light years distant.

Despite containing only one percent of the mass of our galaxy, the LMC contains the Tarantula Nebula (30 Doradus), a star-forming nebula approximately 1,000 light years in size, or roughly seven percent of the galaxy itself. You’ll have to be south of the Tropic of Cancer to observe it, but if you can locate it, its center contains the super star cluster NGC 2070, holding more than 500,000 unique stars, including many hundreds of spectacular, bright blue ones. With a maximum age of two million years, the stars in this cluster are some of the youngest and most massive ever found.

At the center of NGC 2070 is a very compact concentration of stars known as R136, which is responsible for most of the light illuminating the entire Tarantula Nebula. Consisting of no less than 72 O-class and Wolf-Rayet stars within just 20 arc seconds of one another, the most massive is R136a1, with 260 times the sun’s mass and a luminosity that outshines us by a factor of seven million. Since the light has to travel 170,000 light years to reach us, it’s quite possible that this star has already died in a spectacular supernova, and might not even exist any longer! The next time you get a good glimpse of the southern skies, look for the most massive star in the universe, and ponder that it might not even still be alive.

Images credit: ESO/IDA/Danish 1.5 m/R. Gendler, C. C. Thöne, C. Féron, and J.-E. Ovaldsen (L), of the giant star-forming Tarantula Nebula in the Large Magellanic Cloud; NASA, ESA, and E. Sabbi (ESA/STScI), with acknowledgment to R. O’Connell (University of Virginia) and the Wide Field Camera 3 Science Oversight Committee (R), of the central merging star cluster NGC 2070, containing the enormous R136a1 at the center.

Volunteer to Serve on the Membership Recognition Committee
by Larry Campbell

A Membership Recognition Committee has been formed and an email address (recognition@slasonline.org) has been set up so that recommendations can be submitted to the committee. The chairman, Larry Campbell, is seeking committee members to begin the task of deciding how best to recognize the many volunteers within SLAS who donate so much time and effort to our society. If you have any experience with any recognition programs with any organization (astronomical or otherwise), please contact Larry and volunteer to serve on this committee. However, experience is not a prerequisite to serving on the committee.
Two telescopes donated to SLAS

Mark Jones

SLAS received two more telescope through public donations. The first scope is a Meade Polaris Digital DS-60mm Refractor. It came with a tripod, accessory tray, a 90-degree angle diagonal, 25mm, 12.5mm and 4mm eyepieces and a 3X Barlow. All eyepieces are the 0.965" Japanese standard size. It did not come with the optional electronic controller. The dew shield is missing off from objective lens and there is no dust cap. The condition of this scope prevents it going into our Loaner Scope Program and makes a good candidate for resale.

The second scope is a Celestron PowerSeeker 127 Reflector. This telescope is on a manual equatorial mount. The scope has 1 1/4" focuser and one 20mm Kellner eyepiece. The optics are clean and but need collimation. All parts appear functional and in good condition. The telescope will likely go into our Loaner Scope program.
Jupiter on April 01, 2015 Image with Great Red Spot (GRS) on the left limb was recorded in Very Good Seeing (S5). The other image was recorded in Very Fine Seeing (S7) that is rare in the Midwest. Note: Small features in the GRS image are even smaller in the other image recorded 25 minutes later. Jupiter rotates from right to left with South at the top. Warm temps with more humidity may account for the much above average seeing conditions.
St. Louis Astronomical Society Executive Board Meeting Minutes for February 12, 2015

1. Opening Activities:
Meeting called to order at 7:19pm Attendees: Jim Small, Brad Waller, Tom Nickelson, Bill Winningham, Paul Baldwin, Mark Jones. Feb minutes were sent out before the meeting. Minutes were reviewed and approved. Brad motioned to approved minutes, second by Tom. Motion passed.

2. External Business  SLSC  Friday, April 3:  SLSC is not available for Astronomy Day on April 25th. Kirkwood Library contacted as an alternative. Lynn Bosso 314-821-5770 ext 1011 lbosso@kirkwoodpubliclibrary.org
Next board meeting: April 9, May 7, June 11, July 9, August 6, Sept 10, Oct 8, Nov 12, Dec 10. Need Don Ficken to check YMCA dates.

3. Director Reports:
President: Goals for 2015 and beyond. The beginnings of a strategic plan. 1. Attract new members – We need to plans to increase our base membership significantly during the course of the year. Number? 50? 100? 2. Retain members – We need plans to retain members that join beyond one year. The retention rate for 2013 was only 20%. 3. Get members involved – We need significant plans to involve our members in both programs and as volunteers.
Homemade Fest. The event at Kirkwood went well. About 25 people attended. Everyone needs to give their homemade fest receipts to Bill.
2017 Eclipse committee – Eclipse 2017 Survey is set up regarding a workshop to take place October 3rd, 2015. Spoke with Bob Baer from SIU – Carbondale regarding workshop and the eclipse. Invited Dr. Baer to speak at our meeting this summer.
Vice President – Paul Baldwin: March Speaker will be Rich Heuermann on Asteroids and Ceres. April – Dr. Joseph Marcus M.D. who will talk about Comet 67P And the Rosetta Spacecraft”, May – Kathrin Powell on “All the Mars Rovers and What They Have Discovered”; June New Horizons Preview July Pluto results
Speaker Ideas – Bob Baer possible speaker Jim will check with Baer for June, Brad will check with Cahokia Mounds, they have a possible speaker

Astro 101: Topic: March – Brad Star Fleet Command Update
Secretary – Mark J At the Feb general meeting the Motion passed for $1000 to be added the Loaner scope budget to buy members only library telescope passed. See the Feb board meeting minutes for text of motion.
Treasurer/ALCor –
1. Insurance renewal paid $380 (as budgeted) – (due 5/1/2015)
2. 2014 Form 990-N “e-postcard” filed – (due 5/15/2015)
3. Donation thank you/receipt sent to William Neubert
4. Donation check from LaSalle MS deposited by Jim Small
Positive net income YTD +$547 Income up due to donations and new members joining March/April will see lot of cash flow for the Library Telescope Program
Hospitality – vacant Tom volunteered to do hospitality in March. Mark has soda and chips that he needs to give to Tom prior to meeting.
Board member at large reports
Larry Campbell Recognition program report. No report
Tom Nickelson: Disabled telescope program. Tom will hand over telescope to Mark.
Brad Waller: Raffle of two tickets to see Neil deGrasse Tyson has broken even. All sales from here on are profit. Drawing will be at April meeting.
New Members report Suggestions for new member welcome packet.
Input desired.
Welcome packet Tom will schedule new member packet meeting, in April. Jim, Brad, Mark,
NSN guide including RSVP’s Small
Loaner telescope and list Jones
Dialogs Jones
Newsletter Small
Maps Campbell
Library Small
Calendar for upcoming events Small
Sky map Jones
Planisphere Ficken
Observing for the month Jones
Decal Small
merchandise Small
Resources Small
Pamphlet from Astronomy Small
New members meeting. 6:45pm before April 17th meeting.
New member survey. Brad will coordinate survey questions. Board members must send their questions by Friday March 20th

4. Committee Reports: If needed
Library Telescope Program: Build will take place April 11th at Parkway West H.S. A press release is planned for May 1.
Membership – membership is up to 156, highest since 2012
Merchandise – will get in touch with Johnny Mac’s this week. Infinities now set up to make SLAS logo.
Telescope Making – no report submitted
Librarian – No changes
Newsletter – Deadline is Saturday, March 14th for articles. Newsletter will come out Sunday. Need pics for Homemade Fest
Website – www.slasonline.org/joomla
Night Sky Network – Still have issues with emails to ATT customers. Many star parties on the list. Be sure to volunteer!
SLASdialogs – no report
Dark Site – Campout planned for March 20-22 at Council Bluff Lake south of Potosi, MO
Loaner Equipment – no report
Publicity – Press release sent for March meeting
Observing Programs – Jerry Loethen will take over as Chair person

5. Old Business
Should Hospitality be split into the board position of Membership and the committee head of Hospitality? Board decided to table until after May elections
Looking at our by-laws and the possible reorganization of the operating structure of the Society. Table this until Fall

6. New Business  None

7. Closing Activities
Meeting adjourned 9:02pm
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
8/6/2015  9/10/2015  10/8/2015
11/12/2015  12/10/2015

Dark Sky Observing Dates

See you in April!

Francis Park Events: These events are on Wednesdays the week nearest the first quarter Moon
7/22/2015  8/19/2015  9/16/2015
10/21/2015

SLSC Public Telescope Viewing Events: These events are held the first Friday of the month
Planetarium shows start at 7pm
5/1/2015  3/6/2015  None in July
8/7/2015  9/4/2015  10/2/2015
11/6/2015  12/4/2015

YMCA Edward Jones Star Parties
9/7/2015  10/5/2015

Pattonville Observatory Public Viewing Dates
May 1, 2015  Friday 9:00-11:00 p.m.
May 22, 2015  Friday 9:00-11:00 p.m.

SLAS Merchandise Available

SLAS merchandise is now set up for embroidery at Headz n Threadz at https://hnt.threadthis.com/
There are two locations:
Galleria: 2495 St. Louis Galleria, St. Louis, MO 63117
Telephone: 314.862.2695
galleria@headznthreadz.com
Delmar: 6662C Delmar Blvd  St. Louis, MO 63130  Telephone: 314.863.2695 delmar@headznthreadz.com
Delmar Map

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 Soon to be Available at Infini-tees and Johnny Mac’s

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 MEMBERSHIP APPLICATION

Name: Last __________________________________________________________

First, Middle Initial _______________________________________________________

Address ...........................................................................................................

City, State, Zip Code _______________________________________________________

email address ___________________________________________________________

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

Individual @ $25.00 / 1 year $__________________

Family @ $40.00/1 year $__________________

Publications with discount available with your SLAS membership:

Sky and Telescope @ $32.95 / 1 year $__________________

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

Astronomy @ $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, Membership

13024 Barrett Crossing CT

St. Louis, MO 63122

SLAS OFFICERS

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president at slasonline.org

Vice President Paul Baldwin 314-781-4080

vicepresident at slasonline.org

Secretary Mark Jones 636-394-2342

secretary at slasonline.org

Treasurer Bill Winningham, (Don Ficken - membership)

treasurer at slasonline.org 636-225-0269

Hospitality Vacant effective Dec 31

hospitality at slasonline.org

Board Members at Large:

Tom Nickelson 314-346-9565

board17 at slasonline.org

Larry Campbell 636-244-2867

board15 at slasonline.org

Bradley Waller 314-481-7250

board16 at slasonline.org

ALCOR Bill Winningham 636-225-0269

(Astronomical League Correspondent) treasurer at slasonline.org


msral_rep at astroleague.org

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darksite at slasonline.org

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librarian at slasonline.org

Library Telescope Program Don Ficken 636-851-9630

librarytelescope at slasonline.org

Loaner Equipment Greg Gaines 314-277-3082

loaner at slasonline.org

Merchandise Vacant

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Recognition Larry Campbell 636-244-2867

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‘SLASdialogs’ Moderator Mark Jones, Rhonda Whelan
dialogsmoderator at yahoo.com

Star Party Coordinator Mike Malolepszy 314-781-4701

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
ST. LOUIS ASTRONOMICAL SOCIETY

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