

Saguaro Skies

Saguaro Astronomy Club, Phoenix, AZ

Volume 42, Issue 7
July 2018



The President's Corner

mail to: president@saguaroastro.org

If you haven't heard, we have lost our double-size meeting room at Grand Canyon University. The school changed the double rooms to storage rooms and changed the locks so the security guards do not have a key. If you were not there, in our June meeting we squeezed into one of the smaller (standard size) classrooms. We have a couple of volunteers looking for a larger room. I am looking for a larger space as well. We need something in central Phoenix large enough for 60 people. The East Valley Astronomy Club meets in a library. Perhaps we can find similar accommodations. Any recommendation from the club at large are most appreciated. In the mean time we will have to "squeeze in" but please do not let the confines deter you from attending. Please, nobody eat a lot of garlic before the meeting.

By unfortunate circumstance SAC and EVAC will be meeting on the same night, July 20, and more dates later in the year. My apology to the people who attend both groups. We will try to coordinate better.

I have made first contact with the

Grand Canyon University Astronomy Club. I got a positive response from their president about the clubs working together but I need to follow up with other officers of the club. I sent them an e-mail and will provide you more information as it becomes available.

If you haven't seen them, there have been a lot of nice pictures and videos on az-observing@freelists.org.

Clear sky,

David



SAC President, David Dillmore at the Thunderbird Park Spring Public Star Party

Photo: Rick Rotramel

Website: saguaroastro.org Like SAC on Facebook



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Header image © 2000-2013 Stellarium Developers
Scorpius setting in the southwest.

Quick Calendar

Friday, July 20: **SAC General Meeting**, 7:30 PM, Speaker: Tyler Richey-Yowell, Astrophysics PhD candidate, ASU School of Earth and Space Exploration, Topic: "The Ultraviolet Imperative for Assessing the Super-Habitability of Planets"

* **New Room** starting with the the July Meeting: Engineering Building 1-202. It is just north of the parking garage.

Saturday, August 11: **Star Party**, Stoneman Lake Site, Weather permitting, see page 2

Friday, August 24: **SAC Board Meeting**, 6:30 PM, in room next door to main meeting room.

Friday, August 24: **SAC General Meeting**, 7:30 PM, Speakers: SAC Members, "10 Minute Talks" Astronomy related topics. RSVP with Michael Poppre: email: popps@fastq.com



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Editor Notes



Hi Folks,

This issue Steve Dodder reports about the Grand Canyon Star Party, North Rim. It was a success. I volunteered again for my third year in a row; like Steve says, "It's a blast!" Kevin Kozel thinks so too, read his report following the one by Steve.

Best of the NGC features this month NGC 6712, a globular cluster in Scutum.

Check out the ads in *Such A Deal*.

Bits & Pisces has minutes of the June SAC General Meeting, some SAC history and a run down of the June ATM/Astro-Imaging meeting.

In *SAC Outreach*, read the fine report by coordinator Steve Dodder. Lots of photos of all the volunteers and some of the guests there. Then read Kevin's report along with some images he captured in the late evening.

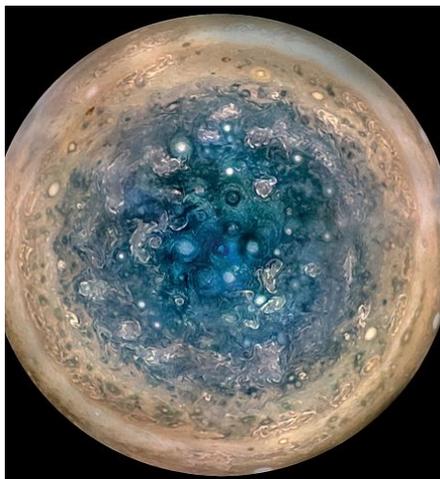
SAC Travel has a report by Rheta Peiser on her recent trip to Java and Bali. See a photo of her with a local astronomy club group in Java. She had a great time visiting with them.

Enjoy!

Rick Rotramel, Editor

Spaceflight Trivia

Can you name the mission involved in this picture below? ([See answer on page 5](#))



NASA

Schedule of Events 2018

SAC General Meetings

Jan 5	Feb 2 plus Board Meeting	Mar 2	Apr 6
May 4 plus Board Meeting	June 22	July 20	Aug 24 & Board Meeting?
Sept 21	Oct 19	Nov 16 plus Board Meeting	Dec ? Holiday Party

@ Grand Canyon University, Fleming Building, 7:30 PM
[See page near back of this issue for location.](#)

ATM/Astro Imaging Meeting
*** No meetings in July and August**

Next meeting:

Tuesday, September 18th, 6:30 PM @ Paul Lind's Shop
210 W. Tierra Buena Lane, Phoenix, AZ

Star Party, Weather permitting

Saturday, August 11, 2018, Sunset, Stoneman Lake Site
<http://www.saguaroastro.org/content/Stoneman-Lake-Directions.htm>

Outreach:

Fall Thunderbird Park Public Star Party

Date: TBA

2018 SAC Officers

President: David Dillmore
Vice President: Michael Poppo
Treasurer: Lori Prause
Properties Director: Robert Brewington
Secretary: Andrew Perry

Photo: Susan Trask



SAC Announcements

Remember to renew your SAC membership!

Mail in your SAC 2018 dues today

Use the form on the last page of this issue or on the SAC website.



Best Of The NGC:

NGC 6712, Globular Cluster in Scutum

By SAC Imagers, Observers & Sketchers

SAC Imager/Observer Kevin Kozel

SAC Observer Steve Coe

TV 102; 5 Mile Meadow, S=6, T=8, 27mm, an obvious globular cluster in a rich Milky Way field. In 8.8mm pretty bright, pretty small, much compressed, 2 stars resolved with averted vision but just flashes.

6" f/8 refractor, TMSF, S+T=5, 8.8mm, pretty bright, pretty large, irregularly round, very little brighter in the middle, 2 stars resolved with direct vision and averted vision adds another 12 or so. This cluster sparkles with stars at the limit of the 6 inch scope.

Nexstar 11, Cherry Rd, S+T=6/10, 14mm, Bright, pretty large, brighter middle, 4 stars are resolved. There are many dark lanes in the Milky Way that run near this compact globular in a rich field of view. Wow!

Nexstar 11, Jojoba site, S=6, T=7, 13mm, 12 stars resolved, pretty bright, pretty large, very little brighter middle, oblate shape. It is much larger with averted vision.

13" f/5.6, Cherry Rd, S=7, T=8, 11X80 - just seen as 5 arcmin fuzzy spot. 100X - pretty bright, large, several stars resolved by mostly a fuzball with 8 stars resolved, averted vision really makes it grow to about double in size. 150X - 14 stars resolved with the last 4 stars extremely faint. Great view of an extremely compressed cluster in very rich milky way field of view. 220X-20 stars counted, last 5 stars difficult with averted vision only. Good view of a globular. Somewhat triangular in shape with direct vision and round with averted vision, bizarre change in shape with different views.

16" f/4.5, Five Mile Meadow, S+T=7, 27mm, pretty bright, pretty large, much compressed, triangular, in a very rich Milky Way field of view. 8.8mm, 7 stars resolved total, averted vision makes the cluster larger, adds 10 stars resolved and shows a fuzzy background of unresolved stars.

17.5" f/4.5, Dugas Rd, S=6, T=7, Bright, little elongated, very rich, very compressed. Resolved at 100X, going to 165X brings out a myriad of dimmer members at the edge of resolution. This globular resides in a beautiful, rich Milky Way field that provides a lovely background (foreground?)



152mm Explore Scientific 988mm focal length f/5.6 doublet refractor. Camera used was a Canon 7Ti attached to the scope. Photo exposure time was 60 seconds.

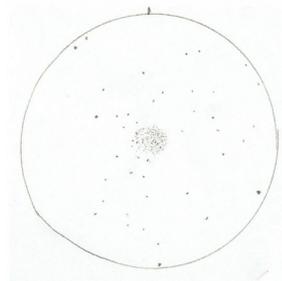
152mm f/5.6 doublet refractor, 11:00 pm on June 13 from the North Rim of the Grand Canyon during the annual star party. At 112x the object cluster was dim but brighter in the upper right side of an elongated fuzzy patch. The photo shows what appears to me as a cone or funnel shape with the small end at the upper right and spreading out to the lower left side. There is a denser cluster of stars shaped like an oval on the top and a flattened side on the bottom at the narrow end of the cluster. There are also a few brighter field stars in the area surrounding the cluster. The viewing at the North Rim was the best I've seen in many years as of late. It was clear and steady viewing for the entire session.

SAC Observer Rick Rotramel

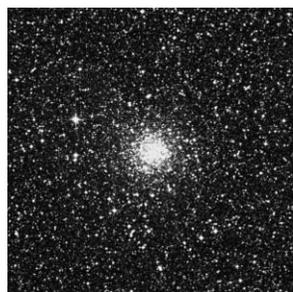
16" f/4.4, 200x; Fairly bright, fairly large, fairly loose globular, irregular density.



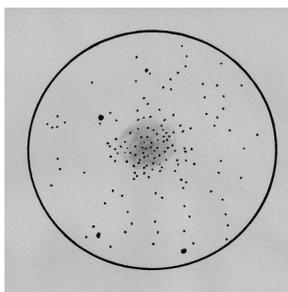
15'x15'



16" f/4.4, 200x



15'x15'



17" f/4.5, 180x



[Click here to return to page 1](#)

Call for *Best of the NGC* images, notes and sketches.

Hello SAC imagers, observers & sketchers:

For **August**, NGC 6818, PN, 19 44.0, -14 09, 10 mag, 22"x15," annular, near NGC 6822, in Sagittarius.

For submitting images, send your file as an attachment in an email to the editor. Please send caption details of the image: Optics, camera, main software used, exposure, location and date taken.

Observation notes are sent in the email text area or as an attached file.

For scanned sketches, send a file with caption details: optics and eyepiece power used.

Email to: r.rotramel@cox.net

For **September**, NGC 6946, Sc Galaxy, 20 34.8, +60 09, 10.5 mag, 14,' diffuse, face-on, in Cepheus.

For **October**, NGC 7009, PN, 21 04.2, -11 22, 8.3 mag, 28"x23," Saturn Nebula, small green oval, in Aquarius.

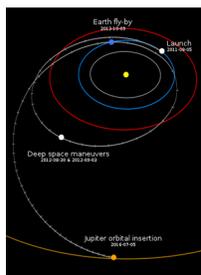
Spaceflight Trivia Answer

Juno Arrives At Jupiter

Mission type Jupiter orbiter
 Operator NASA / JPL
 COSPAR ID 2011-040A
 Website nasa.gov/juno (NASA)
missionjuno.swri.edu (SwRI)
 Mission duration Planned: 7 years
 Elapsed: 6 years, 11 months, 1 day
 Cruise: 4 years, 10 months, 29 days
 Science phase: 4 years (extended until July 2021)
 Spacecraft properties
 Manufacturer Lockheed Martin
 Launch mass 3,625 kg (7,992 lb)
 Start of mission
 Launch date August 5, 2011, 16:25 UTC
 Rocket Atlas V 551 (AV-029)
 Launch site Cape Canaveral SLC-41
 Contractor United Launch Alliance
 Flyby of Earth
 Closest approach October 9, 2013
 Distance 559 km (347 mi)
 Jupiter orbiter
 Orbital insertion July 5, 2016, 03:53 UTC
 2 years, 2 days ago
 Orbits 37 (planned)
 Orbit parameters
 PeriJove 4,200 km (2,600 mi) altitude
 75,600 km (47,000 mi) radius
 ApoJove 8.1 million km (5.0 million mi)
 Inclination 90 degrees (polar orbit)



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Labels in infographic:
 JunoCam, Ultraviolet Spectrograph (EUV), Jovian Infrared Auroral Mapper (JIRAM), Plasma Waves Instrument (WAVES), Gravity Science, Juno Auroral Distribution Experiment (JADE), Microwave Radiometer (MWR), Jupiter Energetic Particle Detection Instrument (JEDI), Magnetometer.



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ITEMS FOR SALE

MEADE ETX-90EC 90mm Maksutov Telescope

- Includes the following:
 - #07426 8 x 21mm Erect Image Viewfinder
 - #07427/#825 8 x 25mm Right Angle Viewfinder
 - Deluxe Tripod
 - Eyepieces:
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 - Meade Super Plossl 26mm LP multi-coated
 - Meade 2X telenegative multi-coated
 - Meade remote controller
 - #880 Table Tripod for Polar Alignment of the ETX-90EC Astro Telescope
 - Manual
 - Compass
 - Carrying Case
 - Allen wrenches



- Selling on behalf of a friend, Asking \$350.00 For all.
- Contact Rick Tejera: 623-203-4121
- Email: Saguaroastro@cox.net

16-inch Dobsonian & Observing Chair

Telescope: 16-inch f/4.5 Enterprise Optics mirror, excellent figure and performance.

- Truss-type Dobsonian, home-made of Baltic Birch structure, bearings of Ebony Star and Teflon.
- Black fabric light shield (not shown in photo)
- 'Scope disassembles and nests into approximately 3-foot cube, to fit into your van.
- Protective box for primary mirror.

Observing chair: stand or sit comfortably, even when viewing at the zenith!

Asking:

\$1900

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Bob Buchheim

Email: oca_bob@yahoo.com

480-646-1324



Celestron Nexstar 130 SLT

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- Orion Lasermate Collimator
- Celestron 2" Universal Digital Camera Adapter
- Meade 2X Barlow Lens
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- Moon filter
- Original manuals and start up guides
- Original investment: over \$600
- Asking for all items: \$375.00
- Steve Scott, 602-502-4955
- Mailto:steve@equitysigngroup.com



For Sale

Orion Maksutov-Cassegrain Telescope - 127mm 5in

\$300.00

602-240-5421 or 602-499-9910

Wanted:

A Meade LX 200 classic mount that fits a Meade 10" or 12" SCT"

Please contact Dave Kenyon

drdkccd@gmail.com

Such-A-Deal

ITEMS FOR SALE

Vixen SXW Computerized, Equatorial Mount with Starbook Controller

I purchased this mount with a Vixen 8" Astrograph on top of it from the estate of the past president of the Riverside Astronomical Society, the astronomical portion of that estate being sold off by RAS at a past RTMC gathering. I sold the astrograph some time ago but the mount has been my primary solar observatory mount for several years now here in Flagstaff. It comes with the manual, deluxe tripod, Starbook controller, two factory counterweights, and any features which were standard equipment on the original unit. Weight capacity is stated to be 35 pounds. It has a Vixen dovetail rail mounting. This mount is easily light enough to be transported and I occasionally drag it down to Camp Verde in the winter months to continue the solar work while staying in our trailer.

This is a very sophisticated mount with an exquisite controller system, the Starbook. It has been very happy with a coaxially mounted Lunt 80mm double stacked solar scope and a Stellarvue 80mm triplet with a Thousand Oaks white light filter on it. I also run a Celestron 9.25" cassegrain on it for planetary.

This is a very good deal at **\$1000**, exactly what I paid for it. If it makes it easier, I might be open to a part trade. I'm open to driving down to Cordes Junction or so to meet.

Fred Tretta, Flagstaff, AZ

Email: ftretta@msn.com



Celestron CGEM Mount-HyperTuned With ADM Upgrades

Package Includes and My Costs:

- Celestron CGEM Mount /w Weight and HC \$1,299
- Hypertune Service \$375
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- Extra Long RA Weight Shaft \$50
- Extra 17 Pound Counterweight \$85
- Celestron Anti-vibration Suppression Pads \$24
- ADM Dual CGEM NOK Saddle \$135
- ADM ALT CGEM Knob \$40
- ADM AZ CGEM Knobs \$35
- ADM CGEM Tripod Knobs \$50
- ADM CGEM Clutch Levers \$50
- ADM CGEM Polar Scope Plug \$10
- 24" Extension Cable for Hand Controller
- 12 VDC Power Cord n/c

Cost of all the r

Asking \$900 OBO

h.

More pictures can be found he

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Hypertune Service. The mount
comes with an extra 17 pound
counterweight and Aluminum
Tripod leg Spreader. The mount
was upgraded with ADM
hardware - below. Overall the
mount is in very good condition. I
know of no issues with the
mount.

SOLD!





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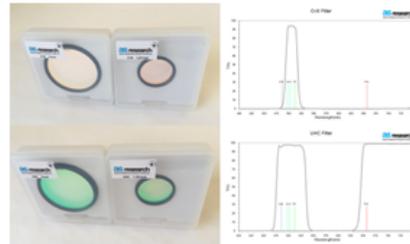
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The HyperStar-equipped Celestron 9.25" telescope (and its backup) that is now installed on the ISS. The scope also features a Starizona MicroTouch Autofocuser. With the Starizona gang: Steve, Scott, Dean, and Donna. (Steve has since had to move to NY because he was dressing too much like Scott.)

Call Us: (520) 292-5010

<http://starizona.com/acb/index.aspx>
dean@starizona.com



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Bits & Pisces

Minutes of the June 22, 2018 SAC General Meeting

By Andrew Perry, SAC Secretary

OPENING:

The club President David Dillmore opened the meeting at 730pm.

Then since the SAC Club Treasurer Lori Prause was out, the treasury's report was given by the club Secretary Andrew Perry, the club has \$4,122 cash on hand.

There are 32 people in attendance and there was one new member. There were 10 members wanting to go to the JB's restaurant after the meeting.

Vice President Michael Poppre was still selling 2018 Messier Marathon t-shirts available for sale that we had left over.

The Novice Leader Steve Dodder talked about the novice group meeting and asked if anyone needed any help with running a telescope.

MEMBER PRESENTATIONS:

Paul Lind did the ATM meeting presentation with pictures of telescopes and other projects. There were 6 members that attended. He also showed they built a camera focus lense. They also built a telescope mount.

Bob Buchheim presented photos of the dome construction at his *Lost Gold Observatory* that he built in his backyard. He thanked everyone that helped lift the dome pieces onto the building and showed several photos throughout the various phases of the construction.

Kevin Kozel showed images of the blood moon along with several other pictures of other astronomical objects taken at the Grand Canyon North Rim Star Party.

Steve Dodder also added that he had a great time looking at Jupiter and Saturn at the GCNRSP. He is working on a report to be added to this newsletter. He also said that the registration for the 2019 event will be updated soon.

Tom Polakis gave a presentation regarding several 2 minute exposures of asteroids and wants to see if there are anything else of interest in these frames. He showed his slides of variable stars that he tracked and he will be submitting them for submission of the star catalog.

The club President announced a break at 8:20 pm.

GUEST SPEAKER:

The club Vice President Michael Poppre called the meeting back to order at 8:30 pm and announced the speaker.

The guest speaker was Kevin Schindler, a Lowell Observatory Historian who has worked there for over 20 years. He gave a presentation called, "Pluto Telescope Renovation and Other News From Lowell Observatory".

Starting July 20th until the end of the year, Flagstaff will be having their "Lunar Legacy" events, <https://www.flagstaffarizona.org/lunarlegacy/> celebrating the city's part in the Apollo missions and there will be an event, activities, and visits from Apollo Astronauts. For more details visit the City of Flagstaff website in the link above.

END MINUTES:

The club President reminded those that want to go to the JB's Restaurant after the meeting.

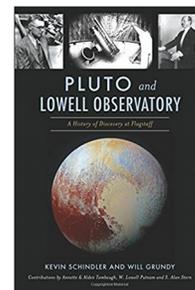
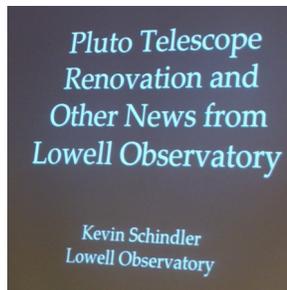
There was also the 50/50 raffle drawing and a drawing for Lowell Observatory books.



Kevin Schindler



The June SAC Meeting Speaker



Photos (3): Susan Trask; Right: Lowell Observatory



Bits & Pisces

New SAC Meeting Location:

Engineering Building 1-202

It is just north of the parking garage.

(Old room location, Building 33)

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- Food Services
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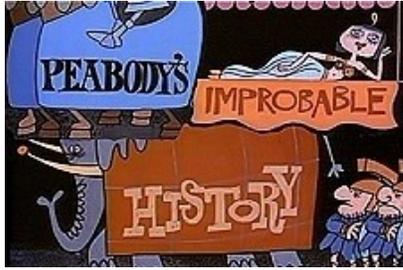


New Meeting Room

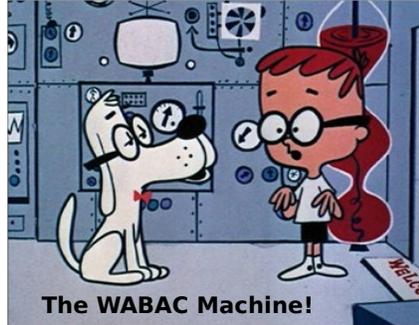
Parking Garage



[Click here to return to page 1](#)



© Peabody and Sherman, 'Rocky and Bullwinkle' Pictures



Where we going today Mr. Peabody?

25 Years Ago in SAC

Saguaro Astronomy Club
 Metro Phoenix, Arizona
SACNEWS



August 1993 — Issue #199 v7.23

Minutes of the July Meeting

President Bob Dahl opened the meeting at 7:32 PM and told the members that SAC had received honorable mention about National Astronomy Day. Tom Polakis reminded members about the Lowell Observatory bus trip and this meeting is the last chance to sign up. The speaker next month will be Frank Zullo, who specializes in night landscape photography. A.J. Crayon announced the meeting of the Deep Sky group for July 8, with the constellation Ophiuchus featured. Stan Student listed the new books and software available in the library.

For "Show'n'Tell", Paul Lind shared his humorous adventure in the darkroom in copying film; Tom Polakis showed slides of the last lunar eclipse; and Pierre Schwaar had slides and videotape of the latest sunrise solar eclipse. Following the break, the main speaker, Chris Schur discussed darkroom procedures for astrophotos.

Respectfully submitted from notes taken by Tim Lee at the meeting.

Correction to the June minutes. Rich Walker was the recipient of the Herschel 400 award and Stan Student received the Messier award. My apologies to both members.

—Susan V. Morse, SAC Secretary

10 Years Ago in SAC

Saguaro Astronomy Club



SACnews

Volume 32 Issue 8 August 2008

VOLUME 32 ISSUE 8 SACNEWS PAGE 9

Bits and Pisces, Minutes of the July General Meeting

By A.J. Crayon



First order of business, after calling the meeting to order, is for visitor introduction. Four came forward with introductions and short comments.

The treasurers report indicated there was \$4109.00 in checking, \$88.00 cash on hand. Year to date has \$2112.00 coming in and \$2860.00 in expenses.

Announcements started with Steve Coe indicating he was resigning as the Novice Group Chairman and that it would be taken over by another Steve, Steve Dodder. Steve Coe has done an excellent job over the years and we look forward to Steve Dodder serving as the new Chairman. The Heck With The Monsoon Star Party was July 26th at Cherry Rd site. Unfortunately no one attended because of weather (*ed. Note: This has been rescheduled for Aug. 23rd*). Steve also showed some images of the moon, Regulus and Mars alignment. Jack Jones announced that Alabama member David Hoffland was awarded the SAC 110 Best Lunar Objects.

The Grand Canyon Star Party, north rim, was discussed by Steve Dodder. There were approximately 200 people every night. Yet the number of scopes that could be accommodated is limited by the size of the veranda. An upcoming event are SAC DOTM on August 2nd, but was clouded out; August 15th next SAC meeting, August 23rd SAC star party.

Esteemed vice-president Jennifer Polakis discussed Chris Watson's Sky Galaxy project and her discovery of a new asterism called, *Jennifer's Confluence*. It is near NGC6567 and has the position 18 13 46 -18 43.6 (J2000). Jerry Belcher discussed and displayed his 50mm f4 refractor.

Jeff Hopkins gave a trial run on a short presentation titled *Light*. It will be presented at the Desert West Community Center. The pickle light demonstration indicated a yellow spectrum. You had to see it to believe it – a pickle has a yellow spectrum!

Jack Jones shared his experience with the Grand Canyon Star Party, south rim, by showing pictures and nice piggyback constellation shots.

By break time there were 36 folks in attendance.

Vice President Jennifer Polakis introduced the speaker, none other than Tom Polakis. His topic was titled *Rounding the Curve on Planetary Imaging*. He discussed his equipment for planetary imaging and how to improve on your results.

And They Build Telescopes

By Rick Rotramel

The SAC ATM (Amateur Telescope Making) / Astro-Imaging meeting was held on Tuesday, June 19, 2018 at Paul's home shop. Attended by: Paul Lind, Dwight, Lynn, Michael McDonald, Robert Brewington, and me.

Helical Focuser for Filter Wheel

Robert Brewington brought in his SBIG filter wheel for his ccd camera with his guider camera helical focuser that he fabricated. He wanted a better version fabricated by Paul that would work better.



The new & old versions of the guider camera focuser

Paul fabricated two pieces for the new focuser. The top piece had 40 threads per inch cut onto the outside of it. The bottom part had inside threads to match.



The completed helical focuser with ccd camera

Bracket for Camera w/Lens & Guider Scope

Michael McDonald brought in parts for Paul to fabricate a bracket for his camera & lens and ccd camera guider scope. Paul fabricated an "L" bracket to hold the guider scope and mounted it to the dovetail plate.



Michael holds his new camera and guider assembly

Astro-Physics 105mm f/5.8 "Traveler"

Dwight Bogen brought in his latest Astromart purchase, a 90's vintage Astro-Physics 105mm f/5.8 "Traveler," a gem from Roland Christen of Astro-Physics. He set it up in the driveway and we all enjoyed the fine view of Jupiter through a Tele Vue eyepiece.



Dwight, Paul, Robert and Michael admire the telescope

Epilogue

That's all for this month, see you next time. Remember, if you have a "need" for your telescope, bring it over to Paul Lind's shop at the next SAC ATM/Astro-Imaging meeting on the Tuesday evening before the SAC general meeting and join in on all the fun. Paul will post the date on the SAC-Forum list. Hope to see you there. It's a fun time for all.

SAC Outreach:

2018 Grand Canyon Star Party North Rim Report

Saturday, June 9 - Saturday, June 16
By Steve Dodder, Coordinator

Arrived Friday at 5:30 pm. The truck pulled the new trailer up the hill with no problem! I was very impressed with the V6. Looks like we got a winning combination for more weekend jaunts. We may even make it up to Frederickson's Meadow for a star party.

Got the camper setup before we knew it and settled in. There's just something about dinner at altitude that makes you want to...sleep. So we did.

Woke up to a beautiful morning, if a little breezy. Had much to do as usual, so we got right on it. Took the telescope down to the veranda and touched base with our new rangers. Well, new to us anyway. Our lead, Ranger Elyssa Shalla has spent the past 8 years or so in the inner canyon at Phantom Ranch and Indian Wells, so she's quite familiar with the canyon's challenges. I'm looking forward to working with her. Our main point of contact, Jesse Barden has less experience, but so far is very enthusiastic and helpful. This year, we finally have the proper chain of command through the Park Service, so I'm really excited about the prospects. More so than the past couple years. It's invigorating!

Rosie covered the campground and I directed traffic at the veranda and ran around the park like a madman. After that was settled, the fun began. The A/V equipment in the auditorium had a bit of a setback. They overheated the projector some more and it took a dump, so we're back to the old one. The good news is, we still have the fancy Bose sound system and the old projector still works quite well. I gave the first talk, "What's to see in the Sky," to a packed house and it went over surprisingly well. The jokes worked, the questions were great and it was a nice "Welcome Back!"

Outside, the wind was howling. I've seen it windy before, but not blowing directly onto the veranda. It gave us all a bit of a pause, but it actually made things better. It was enough of a laminar flow over the canyon that the seeing was absolutely spectacular. Even M101 looked like the pictures. The H2 regions in the arms jumped out and the arms themselves stood up and cheered. Forget about M51. I just wish it looked like that when it had the supernova in it in 2011. I ended the night well after midnight with 122 views. A couple of the volunteers weren't able to setup in time, so we did the night with 7 instead of 10.



Sunday meeting at the Dodders' camp, the new travel trailer at left.
Photo: Rick Rotramel



SAC member Kevin Kozel showing Venus. Photo: Tiare Welch

Sunday arose about the same as Saturday-crisp and bright, (and way too early). I visited around the campground getting reacquainted with the veterans and acquainted with the newbies. "Newbie" is a relative term of course, because one of them is from the Chicago area and probably more qualified to do outreach than I am, with memberships in at least 4 astronomical societies, associations and clubs. He's already a great addition to the usual suspects. We got the juggling of scopes done on the veranda and everyone seems to have enough room.



Mark Johnston shows Jupiter in his scope. Photo: Tiare Welch

Nighttime came and Mark Johnston gave the talk on "Space Exploration: Past And Present." It was a fascinating journey through manned and unmanned spaceflight that had, if not everything, then a significant fraction of everything. By the way, our talks have finally been expanded to the entire hour-long program and replaces the night Ranger Talk series from the NPS. This was truly a great talk and even included how to refute moon landing conspiracists.

On the veranda, things were humming. The wind was lower, but the seeing continued. I got the third best view of Jupiter I've ever seen, with spells of close to the best through a Tek 140 refractor. Amazing details in the bands and zones with festoons galore. Even an 18" f/5 had great views. I ended the night again after 1:00 am with only slightly fewer views at 111. There's a reason, ok, many reasons I do this, but the feedback from the visitors is huge.

Continued next page...

SAC Outreach: Continued

2018 Grand Canyon Star Party North Rim Report

Monday, by the way, it hasn't even approached the high temperatures of last year, so Monday again started great. The new rangers are all over this, setting up the A/V instead of helping, somehow every time I go out and about I see and talk to one. It's great!

The talk was given by a new volunteer named Jim Hopkins. He's from the Chicago area, North Bend, Indiana to be precise. He's in several astronomy clubs and societies and gave a great talk on how to find the stuff we show the visitors. We had some technical difficulties with his computer, but were able to "switch to plan B" just in time. Lots of good questions and answers. The seeing didn't hold up, but it wasn't too bad. I ended the night with 102 views.

Tuesday was a bit chilly to start, hitting around 40° F in the morning. Good sleeping weather, (not that I did any). Things are running smoothly and I even got some recreational reading in. The talk was given by Paul Surowiec, a traveling companion of Jim Hopkins, also from Indiana and the Michiana Astronomical Society, (he's the treasurer). His talk was on equipment, but unfortunately it didn't go over well. His power point was long on facts and short on "pretty pictures." Too bad, too, it was one of the most complete talks on the subject I've seen, and the hour time slot helped make that happen. The visitors don't know what they missed. I packed up a bit early, (11:00 pm) because I had plans to walk into the canyon with my daughter Robin, Wednesday morning, but most all the visitors were gone already, so I didn't feel too bad. It's my first hike into the canyon at the North Rim, so I was really looking forward to it.

Wednesday morning, I got up before 7, had breakfast and hit the road for the hike around 8. Turned out great! We only went to the Coconino Overlook, about 0.7 miles in, (and something like 3 miles out), but it's an 800 foot drop in elevation from the rim. Absolutely amazing views all the way down. So glad I can still do that, if just barely.

Wednesday's talk by Mark Johnston about Mars was jam-packed. One hundred fifty-five folks were counted by the rangers. I think that's a new record, unless the NASA guys back in 2010 had more.

The night was a little soft, with some clouds drifting through, but otherwise very pleasant. There's talk of rain, thunderstorms and much nastiness by the weekend, so we'll just have to see.



The scopes on the veranda at the North Rim Lodge, Monday. Photo: Rick Rotramel

After the talk, I returned to my scope to find a lot of people standing around it for the views in the refractors set up in front of me. I didn't have room to show the Stargate, so I pointed up at M97 instead. Describing how to see the eyes in the nebula was fun and folks seemed to enjoy it. Just about everyone was able to see it with averted vision. I was able to move to other targets in a bit, once the crowd found out I was there, so I hit the usual, (and some unusual) subjects. The Whale Galaxy, the Hockey Stick galaxy, M3 and others, finishing off the night with a couple guys that had never seen through a scope. I bounced all over the sky showing faint fuzzies and bright objects like M11, M23 and the Lagoon. Yet another great night. (Really should get that record fixed, Steve. Nope, I'm fine with "great night" after "great night"!)

Thursday started off great. Beautiful sky, gentle breeze, nice and cool. I went to the store for WIFI to touch up my talk for Saturday. Sometime before I finished, I noticed the clouds had rolled in and the sun disappeared. A bit later I heard a loud roll of thunder. I quickly finished up what I had to do and made a mad dash to the rim to check on the telescopes. As I was picking up the last of my stuff in the store, Rosie walks in, asking if I'd heard the thunder and telling me there was some rain in the campground.

Continued next page...



The scopes on the left side of the veranda. Photo: Rick Rotramel



The scopes on the right side of the veranda. Photo: Rick Rotramel

SAC Outreach: Continued

2018 Grand Canyon Star Party North Rim Report

The cover for my 20" is around 10 years old, so it's getting a bit dry on top. The cracking makes it non-rain-protective, so I needed to add a layer of plastic that I had in the truck. We rushed to the rim to take care of business. We got the cover on the 20" and covered another scope that hadn't been protected and checked all the others to make sure they were ok. Just as we wrapped that up, it started to rain. Slowly at first, but harder all the time. Folks were worried and let me know it. I did my usual "Oh, it'll clear up" song and dance and sure enough, right around 4:00 pm it started to clear and by 7:00 it was just wonderful again. Seeing got a bit soft with some clouds building in the southeast, but not bad.



Samuel with Jim Mahon at his C11. Photo: Tiare Welch

Jim Mahon gave his talk on what's in the sky and it went over as well as ever. He's really good at the podium and keeps things lite. Afterward, I showed stuff until the crowd thinned out and my daughter and her husband came by for the full globular cluster tour. We saw M3, 4, 5, 9, 10, 12, 19, 53, 22, 28, and looked for NGC's 6522 and 6528 in Sagittarius but failed due to the building clouds. I left the veranda with only 83 views, but the visitors were well taken care of.

Friday dawned cloudy. It didn't look good, with the forecast saying 30% chance of rain. We got sprinkles and winds and clouds pretty much all day. I told the group the star party was optional, but that I'd be there with a pair of binoculars, just in case. Jessica Townsend gave the talk. It was supposed to be about the constellations, but she left her PowerPoint at home. She did a great song and dance um, recovery by giving a talk on the search for alien life that they give at Griffith Observatory. It was full of facts and humor and was very entertaining. She left out "life as we know it" more than I liked, but it was very well received anyway.

After the talk, it looked pretty bad. I hung around for a while as the rest of the group did, then I saw the Moon was setting in the west. HA! THE MOON! So I took my trusty 10x50's to the west veranda and asked visitors if they'd seen it in binos. I got around a dozen views of that before I noticed Jupiter was poking through the clouds, as were a few stars. I went back to the east veranda, uncovered the 20" and showed Jupiter, Saturn, Spica and Cor Caroli to about a dozen visitors. Over the course of an hour or so. Cha-CHING! No skunk! It wasn't pretty, but I'm ok with that. Unfortunately, the sky



Mark Johnston & Daniel Sinotte with his 18" Teeter. Photo: Tiare Welch

socked in after 10:30 and I had to call it a night. Ended up with 55 views, after the prospect of none at all, so that worked.

Saturday was a different story. Again, we were facing clouds all day, but they were the thick, dark, grey ones that don't usually dissipate. Hurricane Bud was upon us. It didn't rain much all at once, but off and on all day. Mostly on. When asked, I'd say the usual; "Steve, will it clear up?" "Sure! Of course! (I have no idea)." It didn't. I gave the final talk, "Astronomy is..." V4.3. This one worked pretty well. I geared it more toward what astronomers do and how younger folks can take something they're interested in and turn it into an astronomy career. After the talk, a youngster about 9 years old came up to me with a Celestron bag. It had a small telescope in it. He said he had no idea how to set it up. So I showed him...and his parents...in about 5 minutes. They left with huge smiles on their faces, it was great. Another girl, about 17 or 18 I think came up and had made a list of questions from my talk and others she'd been pondering for some time. I answered a few and she took a card and said she'd email me the rest. Looking forward to that.

Continued next page...



Paul Suroweic, seated at right with his scope. Photo: Rick Rotramel

SAC Outreach: Conclusion

2018 Grand Canyon Star Party North Rim Report



Daniel Sinotte shows Jupiter & it's Red Spot during some fine seeing in his 18" scope; he said, "Structure was seen in the Red Spot."
Photo: Rick Rotramel



Mark Johnston points to the planet Venus, shown in his scope.
Photo: Rick Rotramel

So, about 5 minutes later, a little girl around 5 came up and told me it was raining. Bummer! I go out to check and sure enough, light rain was falling. I called the star party right then because the sky was just too thick for any real hope. We packed up once the rain stopped, but got a little drizzle as we did. You know how sometimes you pack it all up, start to drive home and it clears up? (This happened to me the first 3 times I tried to observe at Kitt Peak.) Well, it didn't happen this time. Clouds were just as thick back at camp as they were at the rim.

This was the first time in 12 years we've been skunked. 12 years. Ninety-six nights. One skunk. I'd say that's a pretty good record. Plus, now that we got the first out of the way, we can start another string!

Overall, it was another great star party. The legendary skies early in the week, the views through other people's scopes, the new trailer and of course the visitors and their questions and enthusiasm were all fantastic. Our numbers were down this year, 7,256 from 12,000+ from last year, but it was well attended nonetheless. We packed the auditorium each night and sent everyone home happy, especially our volunteers from Chicagoland!

Here's hoping you can join us next year. The dates are June 22 through 29.

Clear Skies!

Steve Dodder

Coordinator, Grand Canyon Star Party, North Rim
Chairman, SAC Novice Group
Director, Stone Haven Observatory
fester00@hotmail.com
<http://www.stonehavenobservatory.com>



Jessica Townsend cuddles with a cute dog that a guest had brought down to the veranda.
Photo: Tiare Welch

SAC Outreach:

My 2018 Grand Canyon Star Party North Rim Experience

By Kevin Kozel

The North Rim Star Party began on Saturday June 9, 2018 on a very windy day. The winds continued into the night with just a little calming after 10 pm. The seeing was very good in spite of the heavy winds. There were ten telescopes set up on the veranda for the night and most of the scopes stayed for the entire week.

The visitors on Saturday were very pleased and excited to have the opportunity to have a chance to look at Jupiter, Saturn, Mars and many other deep sky objects through a telescope. Many of the visitors had never used an astronomical telescope before. To do so was a real treat for them. A lot of the people didn't even know a star party was going on, but a very few told me that they planned their trip to the Canyon just to be there while the star party was taking place. For me to here this, it was one of the best compliments I could receive!

Sunday night the wind was back again but the seeing was still very good. The folks got to look at the big planets and a good many deep sky objects again. Before and during the lecture in the auditorium, the veranda was almost empty of visitors. We showed the people Venus and Jupiter during the daylight hours before the sun went down. Right after the talk finished, the crowds got thick and very busy. The people lined up at each scope for a look at the night sky.

Monday, Tuesday, Wednesday were calm and very clear and the night sky was bright with stars. The North Rim is very dark after evening twilight ends and the Park is a Dark Sky Site. The Park turns off the lights in the lodge and the sky really pops out at you. This location is one of the darkest places in North America and because of the high elevation, the atmosphere doesn't get in the way as much as it does at a lower elevation, even at a dark site.

On Thursday, the morning began with sun and then some clouds built up very quickly. Light rain showers with even a bit of very cold hail came down. Before the clouds built up the temperature reached 84 degrees. During the hail storm the temp dropped to 52 degrees. Late in the afternoon, the clouds slowly dissipated and by the time it was dark outside, the sky was clear again. Around midnight, clouds began moving in again.

All day Friday the clouds were thick and heavy with very light rain off and on most of the day. The night was the same but some of the brightest stars were showing dimly through the clouds, so we did not get skunked out for the night. I packed up my telescope late Friday afternoon so I could get an early start home Saturday morning.

Each night after the visitors went home to bed, I had the opportunity to take a few photographs from the veranda under a very dark sky. I shot some photos through my scope and some with the camera attached piggyback to the scope. My scope was tracking well and the shots turned out nicely for a rookie photographer. Three of them are included with this article.

All in all, this trip was very nice. The days were cool under the pine trees and the nights were very dark under the stars. Next year is the 100th anniversary of the Grand Canyon Park and I'll be there again. I hope to see many of my friends again and until then, Clear Skies to all!



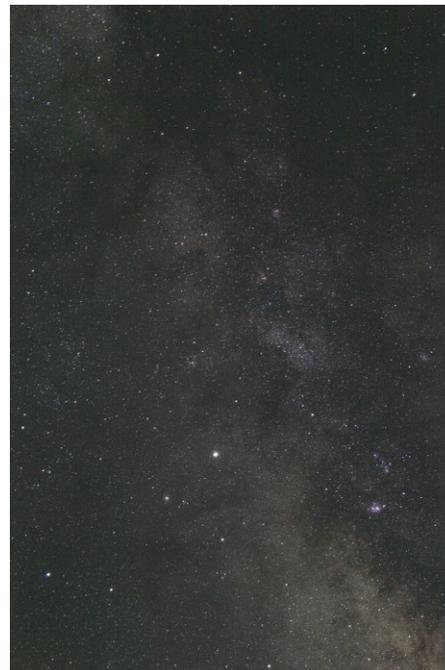
Self portrait of Kevin on his hike in the canyon



Comet Panstarrs N1



M8, The Lagoon



The Milky Way & Saturn below center, M24 center right.

SAC Travel:

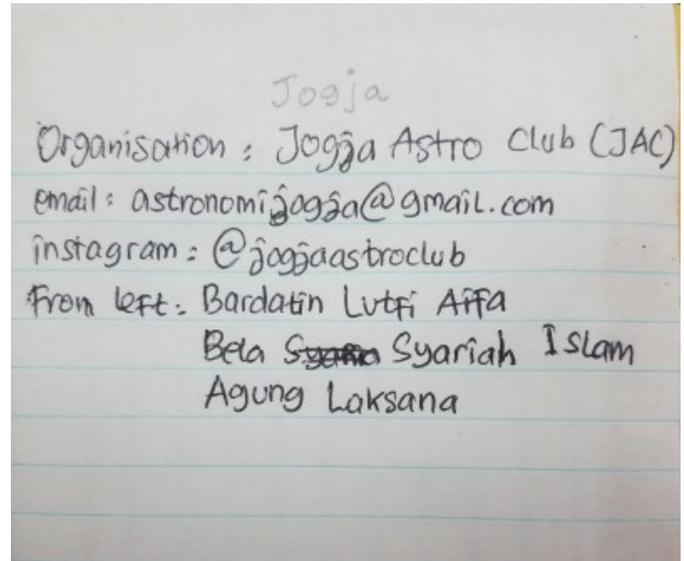
Astronomy in Java

By Rheta Peiser

Just got back from a vacation in Java and Bali and had asked the tour guide if he could run down any astronomy clubs there.

Located the Jogja Astronomy Club in Yogyakarta and they were kind enough to send some members with equipment to my hotel. Unfortunately, it was mostly cloudy and was able to see only Jupiter, Saturn, the Moon, and a very faint Southern Cross from the middle of the city. I donated a copy of the Messier Album which seemed to please them.

On Bali where it was crystal clear apparently there is no astronomy group and I was in hotels with massive lighting, so unable to do any astronomy.



Info for the photo and the club



Me with the vintage copy of Norton's and members of Jogja Astronomy Club



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2018 Board Mtgs:

February 2, 6:30 pm

May 4, 6:30 pm

August 24, 6:30 pm

November 16, 6:30 pm

Occultation Info

Wayne Thomas has asteroid occultation info for the greater Phoenix Area:

[Mail to:tomwaymas@gmail.com](mailto:tomwaymas@gmail.com)

Meeting Location: Grand Canyon University is located at 3300 W. Camelback Rd, Phoenix, AZ. We meet in Engineering Building 1-202, 7:30 to 10:00 PM.



Parking: Turn into the campus from Camelback Road at 33rd Ave. and drive straight and stop at the guard station. Tell the guard you are attending the astronomy club meeting. Then, drive into parking garage and park.

Saguaro Astronomy Club

Saguaro Astronomy Club (SAC), Phoenix, Arizona, was formed in 1977 to promote fellowship and the exchange of scientific information among its members-amateur astronomers. SAC meets monthly for both general meetings and star parties, and regularly conducts and supports public programs on astronomy. Membership is open to anyone with these interests.

Saguaro Skies is posted as a pdf file monthly on the SAC website,

www.saguaroastro.org/content/SACNEWS/newsindex.htm

for browsing or downloading for SAC members and friends of SAC. A email announcement of the monthly newsletter release is included with membership.

Direct all membership inquiries to the SAC Treasurer by using the membership form found in this newsletter. For editorial and SUCH-A-DEAL advertising inquiries, contact the Saguaro Skies Editor.

Contacting This Issue's Authors

If you wish to write to an author in this month's issue, contact them by sending your message to the editor of Saguaro Skies, Rick Rotramel, at: r.rotramel@cox.net

I will then forward your questions or comments to the author.

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Saguaro
Astronomy Club

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*SAC has several email lists. To subscribe, simply send an email to the list address with **Subscribe** on the subject line.*

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SAC-Forum@freelists.org - SAC Forum is a general discussion list for members to discuss the club or astronomy in general.

SAC-Board@freelists.org - SAC Board is a list for discussions of club business. If you'd like to see how the club is being run, this is the list for you.

AZ-Observing@freelists.org - AZ-Observing is not a SAC list, but many members participate. This is the list for discussions on observing around the state.

Please download the PDF version of the monthly newsletter from our website. When the newsletter is published a message will be sent to the email address provided above containing a URL to the current newsletter.

<http://www.saguaroastro.org/content/SACNEWS/newsindex.htm>