Saguaro Skies

Saguaro Astronomy Club, Phoenix, AZ
Volume 49, Issue 6
June 2025

The President's Corner

June is upon us, as are much warmer days and not so bad nights, at least for a month or so. There is **no meeting in June**, we failed to reserve the room early enough. Many of us will not be available to have a meeting in July, so we will meet again on August 8th. I hope we have some good member presentations to go along with our North Rim Star Party report.

I've been out to the antenna site a few times since the last meeting. The road through the arroyo is pretty rough, but doable. Traffic on Hovatter Road, the nights I went out, was light, if any at all. I was also getting pretty nice dark sky readings on my light meter, so the solar facility to the east was of no hinderance to observing. Even the light domes of Yuma and whatever is causing them to the west were much less than the Phoenix light dome when observing from the N Hovatter site.

Early evening temperatures might allow me, and you, to continue using the antenna site throughout June, but a location further north, with lower temperatures would be nice. Anyone have suggestions? My last experience at Fredrickson's Meadow was barely tolerable with the mosquitoes. I will probably try it again this summer, just to get out of town, but if we get much rain, I/we might experience the same problem. I can't imagine staying indoors all summer. We need to find another dark location! Come on, start hunting.

No matter what happens, keep observing and let our newsletter editor know with an interesting writeup or two. Don't forget that we have a Facebook page if any of you want to add something to it. Mike Willmoth (mwillmoth@compuserve.com) might appreciate the contribution.

Stay cool, and keep observing. Clear skies!

Tom Curry

Photo: Susan Trask

SAC on Facebook:
SAC has a Facebook moderator!
Mike Willmoth

Inside this issue:

Quick Calendar

At the clubhouse, 3030 Mission Ln, Phoenix, AZ:

-No SAC general meetings scheduled for June & July.
-Next scheduled SAC meeting is Friday, August 8th, at 7:00 pm
Agenda: SAC Member's Short Presentations & N. Rim Reports

Header image © 2000-2013 Stellarium Developers

* Scorpius setting in the southwest.

Editor Notes

Hi Folks,

Such-A-Deal has one new ad and five old ads.

Bits & Pisces has the minutes of the May 9th SAC general meeting reported by SAC member Steve Rottas.

SAC Observing has for you daily astronomy data from *The Astronomical Calendar.*

SAC Sky has info on the stars and planet locations this month for you all.

Enjoy,

Rick Rotramel

< Left: SAC Webmaster, Terry Shay

Right: SAC ATM Leader, Paul Lind >

Photos (3): Susan Trask

SAC-Forum Email Discussion Group

Join this email discussion group for all SAC business and newsletter release notifications.

Go to Groups.io, search for the group SAC-Forum (or "SAC Forum"). Click on the button down the page to join the group. Your application will be accepted in a day or so by the moderators. Alternatively, send an email to:

SAC-forum+subscribe@groups.io

After your membership is set, go to the Subscription tab on the left. Set your preference as to how you should receive messages.

For help, email **SAC-forum+help@groups.io**

Schedule of Events 2025

SAC General Meetings

Jan. 10	Feb. 7	March 14	April 11
May 9	~~June~~ No Mtg.	~~July~~ No Mtg.	August 8
Sept. 5	Oct. 3	Nov. 7	Xmas Prty Dec, TBD

Meetings held at the Heritage Heights Clubhouse

3030 E Mission Ln, Phoenix, AZ

(SE of State Route 51 and 32nd Street)

Meeting time: 7:00 PM

View video recordings of the ***past*** Zoom meetings here:

https://www.youtube.com/channel/UCEKTf10gwebABZXwKbhe9oA

Grand Canyon North Rim Star Party

Dates: Saturday, June 21-28, Steve Rottas, Coordinator

(Email: gcnrspcoordinator@saguaro.org)

(Web: saguaroastro.org click on "Events")

SAC Officers

Photos: Susan Trask (2), Sandy Milward (3)

President: Tom Curry >

Vice President: Lori Prause >

Secretary: Michael Poppre >

Treasurer: Mitch Prause >

Properties: Ken Milward >

Photos: Susan Trask (2), Sandy Milward (3)

Such-A- Deal

Ads placed here are free to SAC members and friends. SAC is not responsible for the quality of the items. If you wish to place an ad here to sell your telescope or an astronomy related items, contact the editor at: rrotramel601@gmail.com

Astronomy Equipment For Sale

I am closing my BrewSky Observatory in Casa Grande, AZ. All the equipment needs to be sold, so I am offering very competitive prices. Go to the link below for a complete list of items being sold. If you need something small, maybe I have that too...

1 Takahashi FSQ106 $1500

brewsky.space/BigSale/ForSale.html

Questions? Contact Robert Brewington at *eridanibrew@gmail.com*

3 Paramount MX $5000

2 SBig STF8300M $1500

7 Celestron Edge 11" HD $1200

5 Optec TCF-S Focuser $300

6 QSI686-wsq $1400

4 Light Panel $50

8 ExploraDome 8' Automated Dome $1500

Continued next page...

Astronomy Equipment Big Sale (continued)

Xx

Telescopes for sale:

Celestron Edge 11" HD with Homeyer Cradle *Price: $1200 (Orig. Cost: $3700)*

Andy Homeyer used to make beautiful telescope cradles out of 1/2" aluminum to hold SCTs on their mounts, replacing the typical dovetail rails. These eliminated pretty much all flexure in the mounting.
Image 2 shows the C11 in the Homeyer cradle with an extra Losmandy dovetail visible. The Edge is strapped securely into the cradle, then the cradle is bolted directly to the Paramount Versa plate. My TPoint flexure (especially in the piggy backed refractor) was completely eliminated.
It also shows the FSQ106 piggy backed on top via a second Losmandy rail. The Optec focuser and STF8300M are on the back of the C11.
Image 3 shows someone else's C14 cradle without the OTA (mine looks slightly different). The cradle originally cost $800, but I am including it with the C11 since I can't use it for anything else.



Takahashi FSQ106EDX-III *Price: $1500 (Orig. Cost: $3500)*

This is my premium wide field imaging scope. It is a 530mm f5 with FeatherTouch focuser.
The second image shows the current configuration. The Tak is piggy backed onto the Edge 11 using a Losmandy rail and Tak clamshell. I added screws in the clamshell base to allow alignment of the Tak with the Edge 11. Focusing is done with an EasyFocus focuser running a Robofocus motor. A Pyxis Rotator is next, followed by a QSI683 camera with filter wheel and off axis guider.
The third image shows the Robofocus motor connected directly to the FeatherTouch focuser via the knob axle (the knob has been removed). The EasyFocus controller and RoboFocus motor are included.



Takahashi Sky90 *Price: $300 (Orig. Cost: $1800)*

Doublet Apochromat. 50mm aperture. Large back focus adjustment. I should have the FSQ attachment, I have to look through my parts.
I used this for several years, first mounted on a NexStar 11, then on the Edge 11. I was very happy with the results. Eventually moved up to the FSQ106.

William Optics Zenith Star 80mm *Price: $100 (Orig. Cost: $500)*

80mm f6.8. Used as a guide scope before installing the dome. Includes case, nice mounting rings.

SBig Guide Scope *Price: $25 (Orig. Cost: $250)*

This is a small scope/lens similar to an St-i, with a mounting bracket and small USB camera. The product was intended to provide an easy autoguider in a small package.
Unfortunately, the image scales did not work at all for my setup. I expect it should work OK with a main imaging camera with 3 or more arcsecond/pixel.

Astronomy Equipment Big Sale (continued)

Cameras for sale:

SBig STF8300M ***Price $1500 (original cost $3500)***

Includes filters (Astrodon LRGB, Ha, Oiii, Sii) in 8 position filter wheel. Original ST-i guider failed, replaced with QHY5III290 (available separately). Added aluminum threaded rings to guide port to help focus.
Includes Pelican Case, cables.

QSI683-wsg ***Price $1400 (original cost $3000)***

Includes filter wheel with filters, guide port. Has a partial column of bad pixels, easily fixed with dark/bias frames

SBig ST2000XM ***Price $200 (original cost $1200)***

My first quality camera - it is wonderful. I used it for quite awhile. 100,000 e- well depth produces excellent contrast in images. USB connection. Image shows my camera with CFW10 filter wheel attached to a Takahashi Sky90. Only design problem - the guide chip is behind the filters, so I often can't guide with it (especially narrow band). The guide chip no longer works on this unit. Includes CFW10, with original LRGB filters. W/Pelican case & desiccant packs.

QHY5III290 ***Price $50 (original cost $250)***

I have used this as both a monochrome planetary camera and as a guide camera. It works very well. In the second image the camera is installed in the STF8300M guide port. The aluminum rings I made to help focus are visible.

ZWO ASI120M ***Price $50 (original cost $250)***

Monochrome camera used primarily as the guider for the QSI683. Worked very well.

ZWO ASI290MC ***Price $75 (original cost $350)***

Color planetary camera. Used very little (I stopped doing planetary).

Fishcamp Guide camera ***Price $10 (original cost $300)***

This was a very solid, well built guide camera. It uses the same chip as the original Orion guider, but does it much better.

Unfortunately, at Windows 7? 8? the driver didn't work anymore and I couldn't find a replacement driver.

This could be a fun project to write a driver for it. Or, at least it comes in a nice case.

Astronomy Equipment Big Sale (continued)

Mount for sale:

Software Bisque Paramount MX *Price $5000 (original cost $9000,* currently costs $12-18000 *)*

This is the original MX, not the Version II
It has sat for awhile, so it likely needs replacement of the two rubber drive belts. Here in Arizona I need to replace them every couple of years.
I have the original shipping boxes.
Includes TPoint, a truly magnificent tool. TPoint also handles alignment of the mount to great precision.
Includes 2 large counterweights and the shaft extension.

Dome for sale:

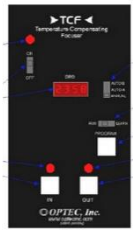
ExploraDome *Price $1500 (original cost $8000)*

This is the 8 foot dome with aluminum roof panels for a 10 foot square building. I used a pre-existing building.
Has an 8 foot pier (2 four foot sections) with Paramount adaptor plate to hold the mount high.
Originally automation hardware/software by Foster Systems to open the shutter and rotate the dome.
Replaced the tracking and shutter controllers with Arduino based systems. Image 4 shows the Arduino tracking controller (smaller black box) on top of a 12V power supply. Image 5 shows the Arduino Shutter controller.
Modified the tracking system to improve reliability and accuracy. Figure 3 shows an added fence on the rotation motor. Originally the dome position was determined by counting the holes in the track. This gives 1 cm precision on the dome position instead of the original 4 cm.
Wrote a VB.NET ASCOM driver to drive the 2 Arduino controllers.
Includes dome and 10' wide building panels around top of roof.
The Dome was painted with a special Arizona paint to reflect the sun, cooling the building. Originally the building was at 135 F.
Images 3 and 5 show Home Depot radiant barrier material fastened to the dome interior to further reduce Arizona heat. This stuff is amazing! The building is now down to 90 F, so the 2 air conditioners can get it down to 82 F.
Figure 6 shows someone else's dome, showing how the top shutter slides back over the dome and the lower shutter hinges open.
Buyer needs to remove dome, ship it to destination.

Astronomy Equipment Big Sale (continued)

Miscellaneous:

Optec Focuser ***Price $300 (original cost $1200)***



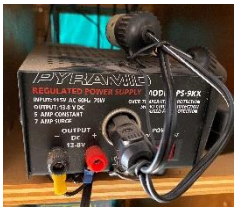
2" Crayford style; very solid.
Includes adaptor to connect to Edge 11".
Connects via RS232 cable.
Edgeport USB to RS232 converter box available (See below).

dgePort USB-RS232 Converter

Price $50 (original cost $250)

Some equipment (especially older things) still use RS-232 connections. This box takes a single USB port and provides 4 COM ports.

Pyramid 12V 5 Amp Power Supply ***Price $25 (original cost $100)***



Typical 12V power supply.

Has connector to run 2 cigarette plugs, or wire directly as seen in the image.

Samlex 12V 30 Amp Switching Power Supply ***Price $150 (original cost $300)***



In the first image this is the larger black box under the dome rotation controller.
This is a higher 30 Amp power supply. I run the output through a RigRunner (visible on the right of the first image) to supply power to the dome rotation motor, the dome shutter motors, and a couple of other minor things. My dome motors require 10 Amps.
The RigRunner is included.

Optec Pyxis 2" Rotator ***Price $250 (original cost $1200)***

This is the original Pyxis rotator from Optec.

Modjack RS232 input.

Edgeport USB to RS232 converter box available (See above).

Astronomy Equipment Big Sale (continued)

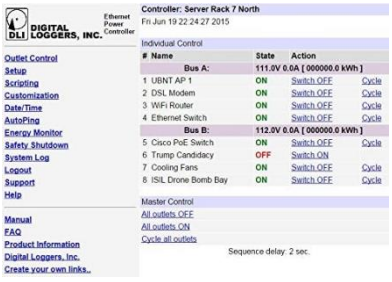
Home Built LED Light Panel *Price $50 (original cost $100)*

This is my fifth attempt at building a Light Panel to automate taking calibration bias and per-filter flat images. This one actually works pretty well. It is built around a 2 foot by 2 foot industrial LED lighting panel intended for ceilings of office buildings (like fluorescent light fixtures). The intensity of the light can be controlled by a resistor (a dimmer switch). The small pink box contains an Arduino and digital resistors (included). The Arduino connects to the computer via USB**.** The panel is mounted on a table fixture allowing adjustment in 3 axes to get it perpendicular to the OTA. This is important - the OTA needs to be perpendicular to the light panel, or you get off center frames. In a small dome you can't just hang the panel on the wall and be positioned appropriately relative to the telescope. The LED panel is very bright even at low settings. Two translucent 1/4" acryllic panels slide into the frame to dim it further. One or both panels can be removed as needed. I wrote a (VB.NET) software utility to determine the correct resistor setting and exposure for each filter (LRGB and narrowband) with about a 3 second camera exposure. Once these settings are determined they are re-used for each calibration run. Since I run ACP, these settings are easy to put into the ACP calibration script. The closed dome is dark enough that frames can be shot during the day, even on Arizona-bright days. I wrote a script to run calibrations during the day rather than waste darkness hours. Depending on the night's target, I typically run 25 bias and 25 of each filter needed for the night. I might need both 1x1 and 2x2 binning, so potentially I need 1600 frames although typically a few hundred. This takes 30-60 minutes. A PixInsight script assembles the individual frames into master frames for use that evening.

LEDLightTable *Price $10 (original cost $150)*

I originally bought this for one of my earlier attempts for a light panel for exposing calibration images (like the Light Panel above). It didn't work - it is too bright and not controllable from the computer. In addition, it runs the screen by scanning down the LEDs by row, so an exposure shows the panel partially lit depending on where you caught the scanning process.
It is intended to be used as a children's toy, and to do tracing work.
Includes power cable.

DLI Internet Power Controller *Price $150 (original cost $500)*



OK, you need one of these. This lets you power up/down equipment from *ANYWHERE* on the Internet.
There are 16 switchable standard outlets in the back of the unit, 8 banks of 2 outlets (second image). Each bank is switchable; for example, perhaps you have a camera and its focuser plugged into one bank. A single command will turn on both devices.
The unit has an ethernet port in front which attaches to your local network (first image). It also has switches to manually control each bank of outlets.

From a browser you access the device by its IP address (i.e., 192.168.2.100). You get the screen in the third image (there are several screens to configure the device). Now you can access all of the devices through the network. For example, I can be in Los Angeles and power everything up for the night. When I am running from the house it is easier to turn things on and off rather than running out to the observatory.

There are more “miscellaneous” items for sale, you can find them on my website.

Copy and paste this link into your web browser:

For Sale (brewsky.space)

eridanibrew@gmail.com Robert Brewington

Such-A- Deal

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mailto:rrotramel601@gmail.com

Telescope Equipment For Sale

** Ads on this page were submitted through the SAC Website*

Meade 8" LS8-8ACF

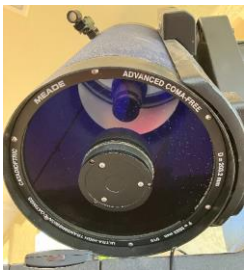
- ACF (Advance Coma Free) optics with UHTC coatings (Ultra High Transmission Coatings)
- LightSwitch Technology: Once the scope is turned on, it permits the scope to automatically level itself and find north (Meade calls this Level/North Technology), then with the use of its internal ECLIPSE CCD camera and on board GPS, alight itself to the night sky without any user intervention. The steps are simple, flip the switch. Once the scope is turned on, you're greeted by the "Astronomer Inside". The "Astronomer Inside" gives you a brief introduction to the LS 8, and informs you of each and every step of the way during the alignment process.
- Eyepieces: Meade 8.8mm and 24mm UWA Series 5000, 82° apparent field of view
- Tele Vue Qwik Point Finderscope
- Tripod
- 602 736-9221
- I'm near 7th St. and Thunderbird. Buyers pick up.
- ***$ Best Offer $***

Email Contact – Click Link Below:

mailto:lorraine.drobny@cox.net

Lorraine Drobny

602 736-9221



Orion 80mm ED Refractor with case

- Orion 80mm, f/7. 5, F.L. 600mm Telescope
- With hard case
- **$ Best Offer $**

Lorraine Drobny, 602 736-9221 lorraine.drobny@cox.net

Celestron Focus Motor, Meade Imager, Eyepieces & Misc. Attachments

- Focus Motor for SCT and EdgeHD Telescopes Sold!
- Several Eyepieces and Misc. attachments Sold!
- Meade Flip Mirror System, Model 644 Sold!
- Meade Deep Sky Imager, Mono CCD Camera
- **$ Best Offer $**
- Lorraine Drobny , 602 736-9221

lorraine.drobny@cox.net

Such-A- Deal

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mailto:rrotramel601@gmail.com

Telescope For Sale:

Vintage Unitron 60mm f15 Telescope

- OTA with four eyepieces, rotating eyepiece mount, barlow, finderscope and wooden carrying case.
- WITH tripod.
- "I think it is the 114 model from the late 1950's or early 1960's with the original box..."
- Paul Jorgenson, KE7HR
- Email Contact: ke7hr@cox.net
- **Asking $250.00**

Celestron C-14 on a Losmandy G11GT Mount

- It is in excellent working condition with very good optics. The Gemini ll was recently upgraded to the latest firmware by Losmandy.
- The OTA is on a Losmandy dove tail and it comes with the heavy duty folding tripod.
- It sadly sits in my garage more than under the stars.
- I know the GC Star party is coming up. Since I live in Mesquite, NV, I can bring it to the North Rim if there is someone interested in purchasing it. They can inspect both the mount and optics with no pressure to purchase.

- I am **asking $6000**
- Thank you for reading this,
- Vince Clements
- (209) 224-1894
- teachu2ride@gmail.com

Bits and Pisces

Minutes of the May 9th SAC General Meeting

By Steve Rottas subbing for SAC Secretary, Michael Poppre

- Meeting called to order at 7:10pm by Tom Curry.

- SAC member Tom Polakis gave a talk about his current "obsession," Solar Imaging with a Spectroheliograph.

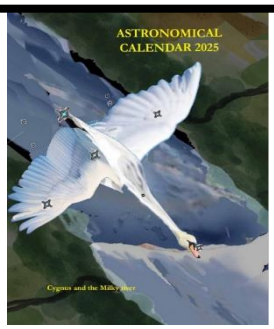
- Guest speaker: David Williams from ASU's School of Earth and Space Exploration. David spoke about his team's work with the NASA *Psyche Mission* and how the Citizen Science program *Zooniverse* is being used to collect science information. He can be reached at: david.williams@asu.edu

- Reminder, due to a room conflict the June meeting has been moved to August 8th. More details; this meeting instead of a guest speaker, SAC members will give short presentations on topics such as observing projects and/or their reports on the Grand Canyon North Rim Public Star Party. You won't want to miss this meeting!

Above: David Williams from ASU's School of Earth and Space Exploration, https://search.asu.edu/profile/203959

- The meeting was adjourned at 8:45 pm.

SAC Observing



ASTRONOMICAL CALENDAR 2025

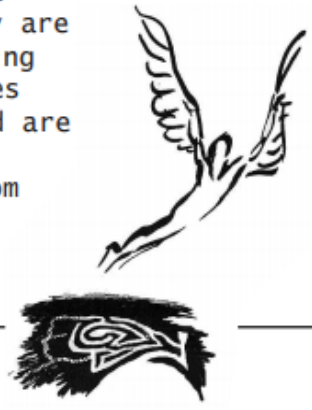
1

The left column gives Julian Dates (number of days from 4713 B.C. Jan. 1 noon), useful for finding time spans between events by subtraction. The first 3 digits of the Julian date (245) are omitted, to save space.

Hours and minutes, where given, are in Universal Time. (Sometimes the hour appears as "24" or the minute as "60," because the instant was shortly before the end of the day or hour.)

Occasions such as "Moon 1.25° NNE of Venus" are **appulses**: closest apparent approaches. They are slightly different from conjunctions, when one passes north of the other as measured in right ascension or in ecliptic longitude. A quasi-conjunction is an appulse without a conjunction, and typically happens when a planet is near its stationary moment.

Occasions when three bodies are within a circle of small size are "**trios**." Like appulses, they are most interesting when the bodies are bright and are not at small elongation from the Sun.



For **meteor showers**: ZHR (zenithal hourly rate) is an estimate of the number to be seen under ideal conditions at the peak time if the radiant were overhead. Actual rates may be very different. Peak times (predicted from where the center of the stream seems to cross nearest to Earth's orbit) are uncertain; best to start watching the night before. Meteor are usually most abundant in the morning hours.

Tell me of errors you notice. It's hard to check the accuracy of every detail, but errors are more easily corrected here than in the former printed *Astronomical Calendars!*

universalworkshop.com/contact

This calendar may be subject to improvement. Come back to it!

Explanation of terms can be found in our glossary book ***Albedo to Zodiac***. There is more about each kind of event in ***The Astronomical Companion***. And events in this list can be traced in the large ***Zodiac Wavy Chart*** for the year.

For all these, see
universalworkshop.com

Continued next page…

SAC Observing

2025 JUNE

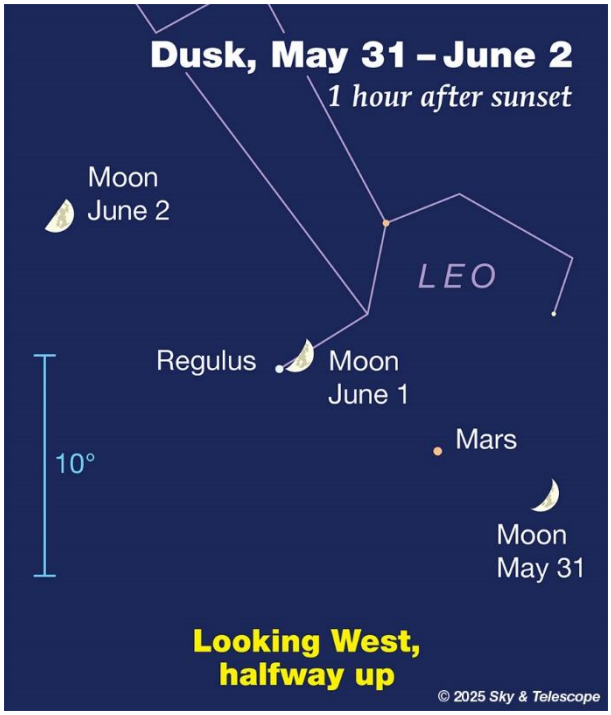
0827.639	Jun	1	SUN	3	Venus at westernmost elongation; 45.9° from Sun in morning sky; magnitude -4.3
0827.979	Jun	1	SUN	12	Moon 1.32° NE of Mars; 71° and 70° from Sun in evening sky; magnitudes -9.3 and 1.3
0828.398	Jun	1	SUN	22	Venus dichotomy (D-shape)
0828.667	Jun	2	Mon	4	Moon 1.58° NNE of Regulus; 79° and 78° from Sun in evening sky; magnitudes -9.6 and 1.4
0829.653	Jun	3	Tue	3:41	First quarter Moon
0830.566	Jun	4	Wed	2	Moon at descending node; longitude 174.0°
0833.125	Jun	6	Fri	15	Moon 0.54° S of Spica; 128° from Sun in evening sky; magnitudes -11.2 and 1.0
0833.5	Jun	7	SAT	0	Daytime Arietid meteors; ZHR 30; 4 days after First Quarter Moon
0833.938	Jun	7	SAT	11	Moon at apogee; distance 63.59 Earth-radii
0834.5	Jun	8	SUN		Whit Sunday
0835.313	Jun	8	SUN	20	Mercury 1.97° N of Jupiter; 12° from Sun in evening sky; magnitudes -1.2 and -1.9
0836.125	Jun	9	Mon	15	Mercury, Jupiter, and M35 cluster within circle of diameter 2.66°; about 12° from the Sun in the evening sky; magnitudes -1, -2, 5
0836.155	Jun	9	Mon	16	Mars and Neptune at heliocentric opposition; longitudes 180.1° and 0.1°
0836.625	Jun	10	Tue	3	Mercury 0.99° N of M35 cluster; 13° from Sun in evening sky; magnitudes -1.1 and 5.3
0836.979	Jun	10	Tue	12	Moon 0.38° SE of Antares; 169° from Sun in evening sky; magnitudes -12.3 and 1.0
0837.184	Jun	10	Tue	16	Mercury at northernmost declination, 25.31°
0837.245	Jun	10	Tue	18	Mercury at northernmost latitude from the ecliptic plane, 7.0°
0837.823	Jun	11	Wed	7:45	Full Moon
0838.610	Jun	12	Thu	3	Venus at aphelion; 0.7282 AU from the Sun
0839.288	Jun	12	Thu	19	The equation of time is 0
0840.576	Jun	14	SAT	2	Jupiter at northernmost declination, 23.28°
0840.688	Jun	14	SAT	4:31	Earliest sunrise, at latitude 40° north
0844.229	Jun	17	Tue	18	Mars 0.73° NNE of Regulus; 63° from Sun in evening sky; magnitudes 1.4 and 1.4
0844.904	Jun	18	Wed	10	Moon at ascending node; longitude 352.3°
0845.305	Jun	18	Wed	19:20	Last quarter Moon
0845.542	Jun	19	Thu	1	Moon, Saturn, and Neptune within circle of diameter 2.98°; about 86° from the Sun in the morning sky; magnitudes -10, 1, 8
0845.563	Jun	19	Thu	2	Moon 2.98° NNW of Saturn; 87° from Sun in morning sky; magnitudes -10.0 and 1.0
0845.625	Jun	19	Thu	3	Moon 2.19° NNW of Neptune; 86° from Sun in morning sky; magnitudes -10.0 and 7.9
0846.708	Jun	20	Fri	5	Jupiter 1.05° S of M35 cluster; 3° from Sun in evening sky; magnitudes -1.9 and 5.3
0847.611	Jun	21	SAT	2:40	June (northern summer) solstice
0847.611	Jun	21	SAT	2:40	Sun enters the astrological sign Cancer, i.e. its longitude is 90°
0848.151	Jun	21	SAT	16	Sun enters Gemini, at longitude 90.51° on the ecliptic

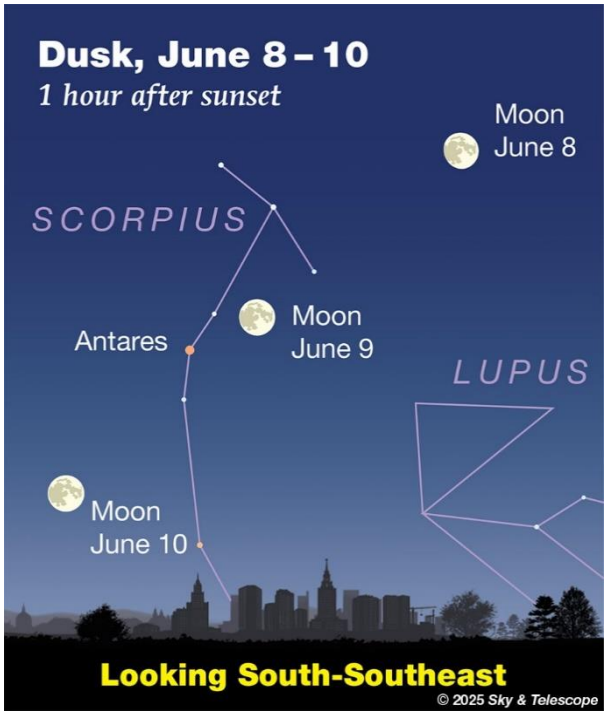
Continued next page…

SAC Observing

0848.563	Jun	22	SUN	2	Mercury 5.0° SSW of Pollux; 22° and 24° from Sun in evening sky; magnitudes -0.1 and 1.2
0848.708	Jun	22	SUN	5	Moon 6.8° NNW of Venus; 45° from Sun in morning sky; magnitudes -8.0 and -4.2
0849.270	Jun	22	SUN	18	Saturn at west quadrature, 90° from the Sun
0849.558	Jun	23	Mon	1	Moon, Uranus, and the Pleiades within circle of diameter 4.84°; about 32° from the Sun in the morning sky; magnitudes -7, 6, 3
0849.583	Jun	23	Mon	2	Moon 4.8° NNW of Uranus; 33° from Sun in morning sky; magnitudes -7.1 and 5.8
0849.667	Jun	23	Mon	4	Moon 0.68° NNE of Pleiades; 32° from Sun in morning sky
0849.698	Jun	23	Mon	4:46	Moon at perigee; distance 56.94 Earth-radii
0851.139	Jun	24	Tue	15	Jupiter at conjunction with the Sun; 6.159 AU from Earth; latitude -0.17°
0851.833	Jun	25	Wed	8	Moon 4.0° N of M35 cluster; 5° and 2° from Sun in morning sky; magnitudes -4.5 and 5.3
0851.900	Jun	25	Wed	10	Moon, Jupiter, and M35 cluster within circle of diameter 5.04°; only about 2° from the Sun; magnitudes -4, -2, 5
0851.917	Jun	25	Wed	10	Moon 5.0° N of Jupiter; 5° and 1° from Sun in morning sky; magnitudes -4.5 and -1.9
0851.939	Jun	25	Wed	10:32	New Moon; beginning of lunation 1268
0853.083	Jun	26	Thu	14	Moon 5.7° S of Castor; 16° and 18° from Sun in evening sky; magnitudes -5.6 and 1.5
0853.313	Jun	26	Thu	20	Moon 2.46° S of Pollux; 19° from Sun in evening sky; magnitudes -5.9 and 1.2
0853.5	Jun	27	Fri		1st day of Muslim year (1447 A.H.)
0853.833	Jun	27	Fri	8	Moon 2.76° NNE of Mercury; 25° from Sun in evening sky; magnitudes -6.4 and 0.2
0854.315	Jun	27	Fri	19:33	Latest sunset, at latitude 40° north
0854.333	Jun	27	Fri	20	Moon 2.17° NNE of Beehive Cluster; 32° and 31° from Sun in evening sky; magnitudes -6.9 and 3.7
0856.042	Jun	29	SUN	13	Moon 1.39° NE of Regulus; 53° and 52° from Sun in evening sky; magnitudes -8.3 and 1.4
0856.583	Jun	30	Mon	2	Moon 0.40° E of Mars; 59° from Sun in evening sky; magnitudes -8.7 and 1.5

SAC Sky





https://skyandtelescope.org/observing

2025 SAC Officers and Contacts

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President Tom Curry (mail to: president@saguaroastro.org)

Vice-President Lori Prause

Treasurer Mitch Prause mailto:treasurer@saguaroastro.org

Secretary Michael Poppre

Properties Ken Milward mailto:properties@saguaroastro.org)

Non-board Positions

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Newsletter Rick Rotramel (mail to:rrotramel601@gmail.com)

Outreach Sandy Milward

Webmaster Terry Shay (mail to:webmaster@saguaroastro.org)

SAC on Facebook:

Moderator, Mike Willmoth (mwillmoth@compuserve.com)

Meeting Location: The Clubhouse, 7:00 PM, 3030 E. Mission Lane, Phoenix, AZ

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: rrotramel601@gmail.com

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

2025 Board Mtgs:

Board meetings will be called by the SAC President and will contact the board members for the meeting time and date.

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,

https://www.saguaroastro.org/newsletter/

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.

Saguaro Skies Staff

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