

Saguaro Skies



Saguaro Astronomy
Club, Phoenix, AZ
Volume 49, Issue 5
May 2025

The President's Corner

Memories, think cat's, not the musical but catadioptric telescopes. OK, this line is really reaching to be clever. This month's "Letter" is about our memories, specifically of our outings at the Salome Emergency Air Field (SEAF). Remember me telling you about the solar installation going in northeast of the airfield? Well, it is in and massive. For those of you who have been to the north Hovatter Road site for events, you probably noticed the bright lights from the solar installation. Not that big an issue, just one that adds to the light pollution in the area.

The second solar installation was/is to go in a mile south of the center of the SEAF, as the crow flies, or so the project map indicated. While the first installation was being constructed, I and some others ventured to the SEAF for observing with not too bad light pollution from the first installation. I monitor the Bureau of Land Management (BLM) website for the project and once the environmental assessment was completed for the second site, the Jove Project, and the Record of Decision was signed by the BLM, the second site was to start construction this spring. Out of curiosity, I drove to the airfield in late April, or to be more precise, where the airfield USED to be, and WOW! The desert has been bulldozed for miles both north and south!

Vinegarroon Road (Tomson St. in Google Earth for some reason), the one off the frontage road leading south the mile and a quarter to the airfield has been bladed at least four lanes wide for about a mile. Strangely, the last quarter mile or so before the airfield turnoff has been left narrow as it was. But when you get to the turnoff, there is only about 100 feet of east west runway/road left before the earthwork smacks you in the face.

The site that has been bladed is MASSIVE! Probably two miles square. Without an aerial photo of the site, tho, I really could not tell how big the earthwork is.

The Socorro Project, to be in the general area north of I-10 and the current solar project is still in the planning/approval stage, but no doubt it will happen. Being closer to the N Hovatter observing site than the current solar project, the light pollution cannot possibly be less! More on this project as it progresses.

Needless to say this site is history for further observing events for those of us who appreciated the flat, ankle breaking rock-free surface of the site. I will miss the site and enjoy thinking of the times we met there, or when I was there solo. Recently, I have been going back to the antenna site. It is OK by me, but no airfield. If you have a good memory of the airfield, send your story to the Newsletter editor for inclusion. Otherwise, see you at the antenna site (or N Hovatter site).

Clear skies,

Tom Curry



Photo: Susan Trask

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With PayPal Link (Via the SAC website)

Header image © 2000-2013 Stellarium Developers

* Scorpius setting in the southwest.

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Quick Calendar

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

Friday, May 9th, SAC General Meeting. 7pm

Guest Speaker: David Williams, ASU's School of Earth and Space Exploration

- Speaker topic: "NASA Psyche Mission: Exploration of a Metal World"



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



Editor Notes



Hi Folks,

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

Bits & Pisces has the minutes of the April 11th SAC general meeting reported by SAC Secretary Michael Poppre.

SAC Observing has

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: 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	July No Mtg.	August No Mtg.
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/UCEKTfI0gwebABZXwKbhz9oA>

Grand Canyon North Rim Star Party

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

(Email: gcnrspcoordinator@saguaro.org)

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

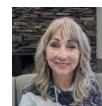
SAC Officers

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...

brewsky.space/BigSale/ForSale.html

Questions? Contact Robert
Brewington at
eridanibrew@gmail.com



1 Takahashi FSQ106 \$1500



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)*



EdgePort USB-RS232 Converter

Price \$50 (original cost \$250)



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).

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

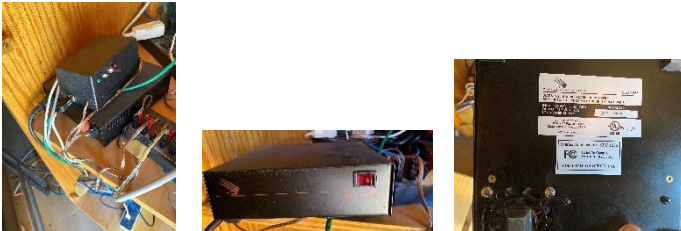
Pyramid 12V 5 Amp Power Supply *Price \$25 (original cost \$100)*



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" acrylic 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)*



Controller: Server Rack 7 North			
Fri Jun 19 22:24:27 2015			
DLI DIGITAL LOGGERS, INC.			
Ethernet Power Controller			
Individual Control			
#	Name	State	Action
Bus A: 111.2V 0.6A (000000.0 kWh)			
1	UBNT AP 1	ON	Switch OFF Cycle
2	DHL Modem	ON	Switch OFF Cycle
3	WiFi Router	ON	Switch OFF Cycle
4	Ethernet Switch	ON	Switch OFF Cycle
Bus B: 112.2V 0.6A (000000.0 kWh)			
5	Cisco PoE Switch	ON	Switch OFF Cycle
6	Trump Candidacy	OFF	Switch ON Cycle
7	Cooling Fans	ON	Switch OFF Cycle
8	ISIL Drone Bomb Bay	ON	Switch OFF Cycle
Master Control			
Manual		All outlets OFF	
FAQ		All outlets ON	
Product Information		Cycle all outlets	
Digital Loggers, Inc.			
Create your own links.			
Sequence delay: 2 sec.			

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 \(brewsky.space\)](http://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, align 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



Correction: In the January 2025 issue, the "Sold" sign was placed incorrectly here.



Bits and Pisces

Minutes of the April 11 SAC General Meeting

By SAC Secretary, Michael Poppre

- Meeting was called to order by President Tom Curry at 7:02pm. There were 25 members present including two new members.
- Treasurer Mitch Prause reported SAC has \$5,458 in the account. We were helped by several donations and a new “life time” member. One anonymous donor gifted SAC with \$1,500. Thank you very much.
Mitch reported we have 40 paid members so far this year.
Tom Curry reported the Thunderbird Park Public Star Party is (so far) still scheduled for May 3rd. However, he was not entirely sure the City of Glendale was as involved in supporting this as they have been in the past. If city support is lacking again this year, the club may forgo future events.
- VP Lori Prause asked for someone to take over as local outreach events coordinator as this is currently held by Tom Curry. Sandy Milward volunteered.
- Tom reported numbers attending the Spring Star Party and Messier Marathon. He said there were 3 on Wednesday, 9 on Thursday, 18 Friday and 30 on Saturday. Mitch reported raffle ticket sales of \$285 and T-shirt sales of \$190. Dinner ticket sales just broke even. A total of 9 observers turned in MM object lists. The highest items found was 109 by Brian Poole. He only missed M30 in the early morning.
- Steve Rottas reported the Grand Canyon SP is a go again this year. He has so many volunteers there is a waiting list.
- Tom opened the floor to new business and Terry Shay raised a question regarding the schedule change to not meeting in the summer months of June, July and August. He said by the time we actually meet again in September almost four months have passed. A motion was made and seconded to change the summer schedule to meet in June but not July and August. Discussion followed and a vote was taken with 11 yes, 5 no and 9 abstentions. Motion passed. The group was in agreement to feature members presentations for the June meeting. This eliminated the need to find a speaker for the June meeting.
- Paul Lind gave a short presentation on activities in the ATM group. He showed mirror grinding using an optical spindle and first light with the groups new 6” Dob mounted ‘scope. Well done all.
- Terry Shay presented photos he took during the latest lunar eclipse using both his DSLR and iPhone cameras. He also took some with his Vespera Smart ‘scope and found it had trouble capturing photos due to the changing brightness of the moon as it went through the different eclipse phases. He also showed photos from the recent MM.
- There was a short break for sodas and cookies while the main speaker prepared his materials.
- Lori introduced the main speaker, Tyler Karasinski with the ASU School of Earth and Space Exploration, Near Earth Space Sensing Group. Tyler is an astrophysics PhD student. He gave a very informative and interesting talk titled, “An Ocean in the Atmosphere” on the subject of the earth/Sun relationship and atmospheric gravity waves.
- The meeting was adjourned by Tom Curry at 9:10 pm.





SAC Imaging

Total Lunar Eclipse, March 13-14

Imager: Terry Shay



Occultation of Mars by the Moon, April 10, 2025

Imager: Terry Shay



Mars Occultation by Moon



Moon in the sky during the eclipse partial phase



SAC Observing

The Old Emergency Airfield Observing Site/Solar Projects

Photos By Tom Curry



Photo 1



Photo 2



Photo 3



SAC Outreach

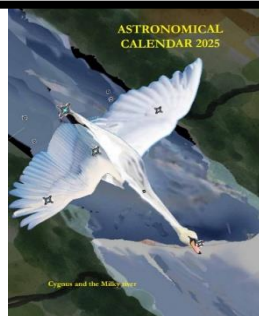
The Thunderbird Park Star Party, May 3rd

Photos by Tom Curry



Tom Curry, Sandy & Ken Milward & Terry Shay



**SAC Observing**

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ASTRONOMICAL CALENDAR 2025

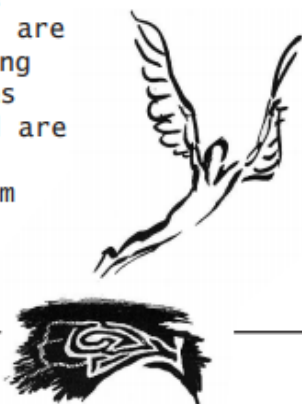
1

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 MAY
0797.000	May	1	Thu	12	Moon 4.2° N of M35 cluster; 52° and 51° from Sun in evening sky; magnitudes -8.4 and 5.3
0797.014	May	1	Thu	12	Asteroid 4 Vesta at opposition in longitude; magnitude 5.6
0798.292	May	2	Fri	19	Moon 5.4° S of Castor; 68° from Sun in evening sky; magnitudes -9.2 and 1.5
0798.521	May	3	SAT	1	Moon 2.14° S of Pollux; 71° from Sun in evening sky; magnitudes -9.3 and 1.2
0799.125	May	3	SAT	15	Venus 2.03° N of Neptune; 42° from Sun in morning sky; magnitudes -4.5 and 7.9
0799.486	May	3	SAT	24	Pluto stationary in longitude; starts retrograde motion
0799.542	May	4	SUN	1	Moon 1.99° NNE of Mars; 84° and 83° from Sun in evening sky; magnitudes -9.8 and 1.0
0799.558	May	4	SUN	1	Moon, Mars, and Beehive within circle of diameter 2.58°; about 84° from the Sun in the evening sky; magnitudes -10, 1, 4
0799.604	May	4	SUN	3	Moon 2.60° NNE of Beehive Cluster; 84° from Sun in evening sky; magnitudes -9.9 and 3.7
0800.078	May	4	SUN	13:52	First quarter Moon
0801.063	May	5	Mon	14	Mars 0.61° NNE of Beehive Cluster; 82° from Sun in evening sky; magnitudes 1.0 and 3.7
0801.206	May	5	Mon	17	Pluto stationary in right ascension; starts retrograde motion
0801.375	May	5	Mon	21	Moon 1.84° NE of Regulus; 105° from Sun in evening sky; magnitudes -10.6 and 1.4
0801.5	May	6	Tue	0	Eta Aquarid meteors; ZHR 50; 1 day after First Quarter Moon
0803.308	May	7	Wed	19	Mercury at southernmost latitude from the ecliptic plane, -7.0°
0803.490	May	7	Wed	24	Moon at descending node; longitude 176.3°
0803.882	May	8	Thu	9	Venus at descending node through the ecliptic plane
0805.854	May	10	SAT	9	Moon 0.39° S of Spica; 154° from Sun in evening sky; magnitudes -11.9 and 1.0
0806.524	May	11	SUN	1	Moon at apogee; distance 63.69 Earth-radii
0808.206	May	12	Mon	16:57	Full Moon
0809.307	May	13	Tue	19	The equation of time is at a maximum of 3.64 minutes
0809.594	May	14	Wed	2	Sun enters Taurus, at longitude 53.55° on the ecliptic
0809.729	May	14	Wed	6	Moon 0.48° SE of Antares; 163° from Sun in morning sky; magnitudes -12.1 and 1.0
0809.762	May	14	Wed	6	Asteroid 3 Juno at opposition in longitude; magnitude 10.2
0813.480	May	17	SAT	24	Uranus at conjunction with the Sun; 20.541 AU from Earth; latitude -0.22°
0816.000	May	20	Tue	11:59	Last quarter Moon
0816.285	May	20	Tue	19	Sun enters the astrological sign Gemini, i.e. its longitude is 60°
0817.838	May	22	Thu	8	Moon at ascending node; longitude 355.1°
0818.188	May	22	Thu	17	Moon 2.52° NNW of Saturn; 62° from Sun in morning sky; magnitudes -8.9 and 1.1
0818.200	May	22	Thu	17	Moon, Saturn, and Neptune within circle of diameter 2.68°; about 61° from the Sun in the morning sky; magnitudes -9, 1, 8
0818.313	May	22	Thu	20	Moon 1.89° NNW of Neptune; 60° from Sun in morning sky; magnitudes -8.9 and 7.9
0819.375	May	23	Fri	21	Moon 3.5° NNW of Venus; 46° from Sun in morning sky; magnitudes -8.0 and -4.4

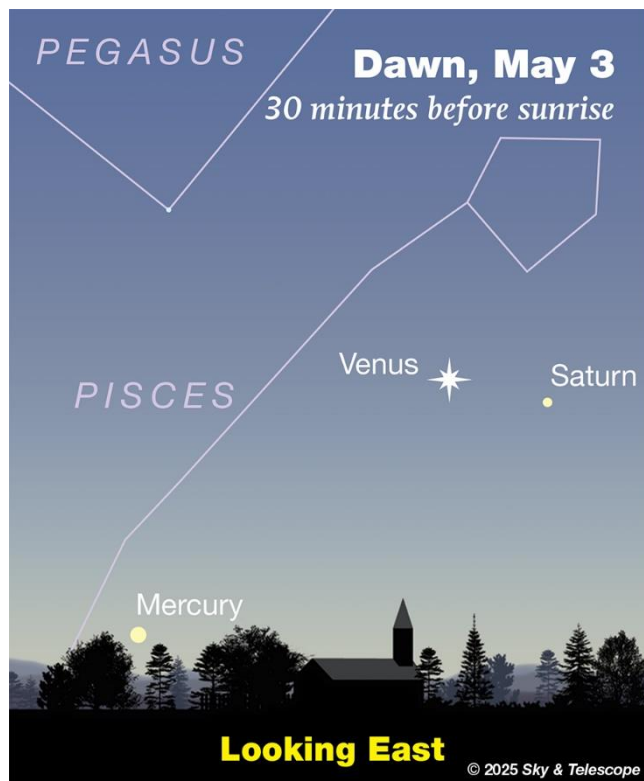
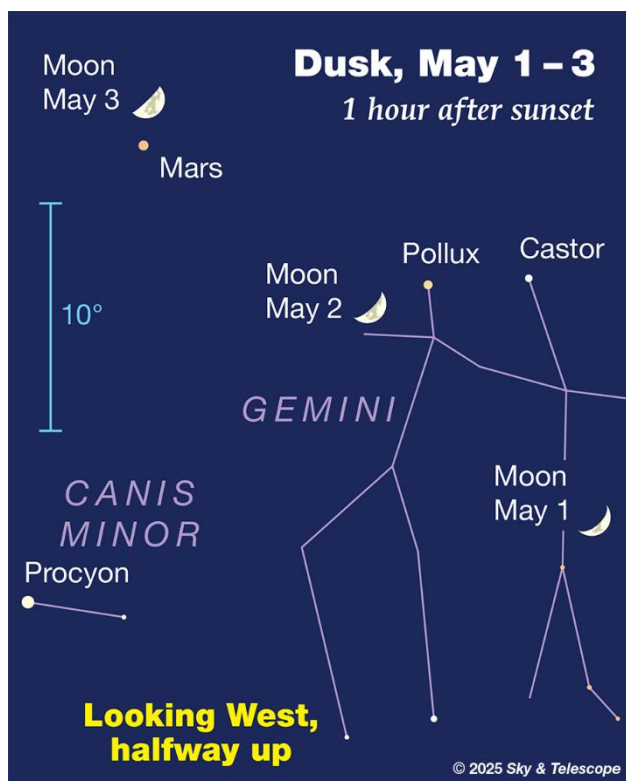
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**SAC Observing**

0820.5	May	25	SUN	0	Mercury 0.14° SE of Uranus; 6° from Sun in morning sky; magnitudes -1.6 and 5.8; quasi-conjunction
0821.564	May	26	Mon	1:32	Moon at perigee; distance 56.29 Earth-radii
0821.792	May	26	Mon	7	Mercury, Uranus, and the Pleiades within circle of diameter 4.97°; about 6° from the Sun in the morning sky; magnitudes -2, 6, 3
0821.875	May	26	Mon	9	Mercury 4.2° SE of the Pleiades; 5° and 6° from Sun in morning sky
0822.083	May	26	Mon	14	Moon 4.7° NNW of Uranus; 9° and 8° from Sun in morning sky; magnitudes -5.0 and 5.8
0822.142	May	26	Mon	15	Moon, Uranus, and the Pleiades within circle of diameter 4.98°; about 8° from the Sun in the morning sky; magnitudes -5, 6, 3
0822.158	May	26	Mon	16	Moon, Mercury, and Uranus within circle of diameter 5.37°; about 7° from the Sun in the morning sky; magnitudes -5, -2, 6
0822.271	May	26	Mon	19	Moon 0.66° NNE of Pleiades; 7° from Sun in morning sky
0822.342	May	26	Mon	20	Moon, Mercury, and the Pleiades within circle of diameter 4.64°; about 6° from the Sun in the morning sky; magnitudes -5, -2, 3
0822.354	May	26	Mon	21	Moon 4.7° N of Mercury; 6° and 4° from Sun in morning sky; magnitudes -4.7 and -1.9
0822.366	May	26	Mon	21	Mercury at ascending node through the ecliptic plane
0822.627	May	27	Tue	3:03	New Moon; beginning of lunation 1267
0823.812	May	28	Wed	7	Mars and Saturn at heliocentric opposition; longitudes 174.6° and 354.6°
0824.063	May	28	Wed	14	Moon 5.2° N of Jupiter; 21° and 20° from Sun in evening sky; magnitudes -6.1 and -1.9
0824.417	May	28	Wed	22	Moon 4.1° N of M35 cluster; 25° from Sun in evening sky; magnitudes -6.5 and 5.3
0825.470	May	29	Thu	23	Summer solstice for Mars north hemisphere
0825.667	May	30	Fri	4	Moon 5.6° S of Castor; 42° and 43° from Sun in evening sky; magnitudes -7.7 and 1.5
0825.668	May	30	Fri	4	Mercury at superior conjunction with the Sun; 1.322 AU from Earth; latitude 2.45°
0825.896	May	30	Fri	10	Moon 2.32° S of Pollux; 45° from Sun in evening sky; magnitudes -7.9 and 1.2
0825.979	May	30	Fri	12	Mercury 6.1° NNW of Aldebaran; 1° and 6° from Sun in evening sky; magnitudes -2.3 and 0.9
0826.938	May	31	SAT	11	Moon 2.36° NNE of Beehive Cluster; 58° and 57° from Sun in evening sky; magnitudes -8.7 and 3.7
0827.039	May	31	SAT	13	Mercury at perihelion; 0.3075 AU from the Sun



SAC Sky



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2025 SAC Officers and Contacts

Board Members

President	Tom Curry	mail to: president@saguaroastro.org
Vice-President	Lori Prause	
Treasurer	Mitch Prause	mailto:treasurer@saguaroastro.org
Secretary	Michael Poppo	
Properties	Ken Milward	mailto:properties@saguaroastro.org

Non-board Positions

Novice Leader	Steve Dodder	mail to:fester00@hotmail.com
Newsletter	Rick Rotramel	mail to:rrotramel601@gmail.com
Outreach	Sandy Milward	
Webmaster	Terry Shay	mail to:webmaster@saguaroastro.org

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



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

Editor: Rick Rotramel; Photographers: Tom Curry, Sandy Milward, Tom Polakis, Michael Poppo, Rick Rotramel and Susan Trask.

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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.



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