



Saguaro Astronomy Club, Phoenix, AZ

Volume 48, Issue 4
April 2024

The President's Corner

As we cruise through April in springtime, we say good-bye to the showstoppers of the winter sky and await those of summer. Many celestial gems are in the spring sky; it just takes a bit more look'n to find them. One in particular I found while hunting down the H400 list lies in Leo, the mighty lion. This is also one of those objects that makes one wonder, how did Messier miss that! (There are quite a few of those objects, can you name some more?)

I'm talking about the galaxy NGC 3521. This is a beautiful spiral that made me go "Wow!" when I first saw it in May of 2020 from Kartchner Caverns State Park in southern Arizona. In his notes from the SAC H400 list, Steve Coe described it as a "mini-Andromeda galaxy." I certainly had to agree. Funny, I realized later I found this using a 6" f5 Newtonian that I bought from - Steve Coe. Now that Leo is once again on the prowl across the spring sky, I'll have to revisit this gem with a larger 'scope.

So pack up your 'scopes, head for dark skies and enjoy the fainter but just as satisfying objects of the spring nights.

Happy Star Hunting,

Michael Poppre,
SAC President



Photo by: Susan Trask

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

Quick Calendar

* **The next SAC general meeting is on Friday, April 26th, 7:00 pm.**
There will be no guest speaker.

Topic will be: "Reports by SAC members of their viewing of the April 8th Total Eclipse of the Sun"

Note: **"In-Person" meeting only, No Zoom meeting access!**
@ 3030 E Mission Ln, Phoenix, AZ (SE of State Route 51 and 32nd Street)

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



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Editor Notes

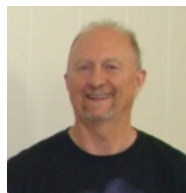


Hi Folks,

Such-A-Deal has seven old ads.
SAC Bits & Pisces has minutes of the March SAC general meeting.
SAC Observing has sky info for the month.
SAC Sky has info on the planets and supernova locations this month for you all.

Enjoy.

Rick Rotramel, Editor >



< Left: SAC Webmaster, Terry Shay



Right: SAC ATM Leader, Paul Lind >

Photos: Susan Trask

Schedule of Events 2024

SAC General Meetings

Jan. 26	Feb. 23	Mar. 22	April 26
May 18 * Saturday	June 21	July 19	Aug. 16
Sept. 13	* Oct. 12 * Saturday	Nov 15	Dec. 14 Holiday Party

* Saturday dates are at Thunderbird Park Public Star Parties, Glendale, AZ

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>

Thunderbird Park Public Star Party & SAC Meeting Combination

Glendale, AZ Saturday, May 18th @ Sunset

Grand Canyon Star Party North Rim, June 1st – 8th, 2024

For the Grand Canyon North Rim event:
 email Steve Rottas: srottas@gmail.com

2024 SAC Officers

President: Michael Poppre >



< Vice President: Steve Rottas

Secretary: Sandy Milward >



< Treasurer and Properties Director: Tom Curry

Photos: Susan Trask



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

Such-A-Deal

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

rrotramel601@gmail.com

Canon EF 200mm f/2.8L II USM Lens

For Sale - Canon EF 200mm f/2.8L II USM Lens

It's in good condition and includes the following.

Canon Lens - \$600 from B&H Photo

B&W UV Filter - \$75

Canon Tripod Mount Ring - \$150

Lens Caps and Lens Hood

Carrying Bag

Asking \$300 OBO.

Cash or bank cashier's check.

Contact me at the email below.

jimwaters@cox.net



Tele Vue 31mm Type 5 Nagler Eyepiece

For Sale - Tele Vue 31mm Type 5 Nagler Eyepiece

The optical coatings are in good condition and I can't find anything wrong with the eyepiece including the rubber eye guard. Eyepiece end-caps are included.

My cost new was \$600. **Asking \$300 OBO.**

Cash or bank cashier's check.

Contact me at the email below.

jimwaters@cox.net





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

Such-A-Deal

Ads placed here are free to SAC members and friends. SAC is not responsible for the quality of the advertised items. If you wish to place an ad here to sell your telescope or astronomy related items, contact Rick Rotramel at: r.rotramel@cox.net

Telescope Equipment For Sale

* Ads on this page were submitted through the SAC Website

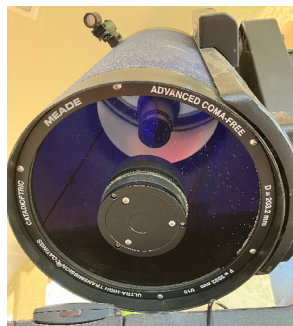
Meade 8" LS8-8ACF

- 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
- TeleVue Qwik Point Finderscope
- Tripod
- 602 736-9221
- I'm near 7 th St. and Thunderbird. Buyers pick up.
- **\$ Best Offer \$**

Email Contact - Click Link Below:

[mailto:lorraine.drobny@cox.net?subject=Meade 8" Telesco pe For Sale in SAC Newsletter](mailto:lorraine.drobny@cox.net?subject=Meade 8)

Lorraine Drobny
602 736-9221



Celestron C11 Telescope On Celestron CGE Mount

- Celestron C11 Optical Assembly
- Celestron CGE Mount
- Celestron WiFi Unit
- Celestron StarSense Unit
- I'm near 7 th St and Thunderbird. Buyers pick up.
- **\$ Best Offer \$**
- 602 736-9221
- Email Contact - Click Link Below:

[mailto:lorraine.drobny@cox.net?subject=Meade 8" Telesco pe For Sale in SAC Newsletter](mailto:lorraine.drobny@cox.net?subject=Meade 8)



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](mailto:lorraine.drobny@cox.net)



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

- Focus Motor for SCT and EdgeHD Telescopes
- Several Eyepieces and Misc. attachments
- Meade Flip Mirror System, Model 644
- Meade Deep Sky Imager, Mono CCD Camera

\$ Best Offer \$

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[Lorraine.drobny@cox.net](mailto:lorraine.drobny@cox.net)





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Such-A-Deal

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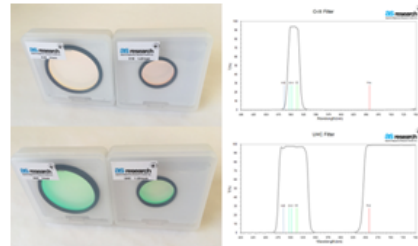
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Overgaard, Arizona

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Telescope
in
Arizona



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The HyperStar-equipped ISERV telescope is now installed on the ISS!

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>
info@starizona.com



Bits & Pisces

Minutes of the March 22 SAC General Meeting

By Sandy Milward, SAC Secretary

- SAC president Michael Poppre called the meeting to order with 14 club members attending.

Future Events:

- Fountain Hills Star Party March 30
- Girl Scouts of Southern Arizona at Central Arizona College Signal Peak Observatory April 13
- Thunderbird Park Public Star Party, Glendale. AZ May 18
- Grand Canyon North Rim Star Party June 1-8
- Tom Curry, SAC Treasurer then gave a report on our finances and paid memberships. The club has \$2,694 in funds, and 28 current paid members.
- President Michael Poppre then gave an All Arizona Messier Marathon Recap. Positive feedback was heard and setups were spread out. Friday there were about 15 setups, Saturday there were about 55 setups with an estimate of 60-70 people. Twelve people turned in observation lists. Steve Rottas from SAC observed the most objects: 109, Craig Averell from High Desert Astronomy Club Kingman came in 2nd with 108 objects, Maiké Cawles from Phoenix Astronomical Society, Ray Malcolm from High Desert Astronomy Club, Kingman and Don Wrigley from EVAC each observed 107 objects for a 3rd place 3-way tie.
- Michael Poppre shared some of his photos from the All Arizona Messier Marathon. Mike was happy to complete his Herschel 400 list at the marathon with NGC 6426 the globular cluster in Ophiuchus.
- Tom Curry then shared thoughts on his Messier Marathon experience. Tom was at the site Thursday through Sunday. His Celestron StarSense Auto Guider worked great once he figured it out. He had a fun weekend and thought it all worked out great.
- Terry Shay shared some of his photographs from Saturday at the All Arizona Messier Marathon, some great shots of participants and the night sky from dusk to dawn.
- Next, members shared their plans for the Solar Eclipse.
- Then Steve Rottas shared the video, "2024 Solar Eclipse Preparation - Smarter Every Day 295b."
Destin, and Dr. Gordon Telepun share eight things to observe during the eclipse:
Temperature
change, Pinhole Projection, How light rays change, Sharp and Fuzzy shadows, Wind (eclipse breeze), creation and dissipation of connective clouds, Animal behavior, and Shadow snakes or shadow bands.
- The meeting adjourned slightly after 9PM.



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SAC Observing

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2024

ASTRONOMICAL CALENDAR

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www.universalworkshop.com



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

0401.5	Apr	1	Mon		All Fools' Day
0402.336	Apr	1	Mon	20	Mercury stationary in right ascension; starts retrograde motion
0402.424	Apr	1	Mon	22	Mercury stationary in longitude; starts retrograde motion
0402.635	Apr	2	Tue	3:15	Last quarter Moon
0404.063	Apr	3	Wed	14	Venus 0.26° SE of Neptune; 16° from Sun in morning sky; magnitudes -3.9 and 8.0

Continued next page...



SAC Observing

0405.636	Apr	5	Fri	3	Middle of eclipse season: Sun is at same longitude as Moon's ascending node, 15.8°
0406.750	Apr	6	SAT	6	Moon 1.80° SE of Mars ; 35° and 36° from Sun in morning sky; magnitudes -7.4 and 1.2
0406.883	Apr	6	SAT	9	Moon, Mars, and Saturn within circle of diameter 3.04°; about 34° from the Sun in the morning sky; magnitudes -7, 1, 1
0406.958	Apr	6	SAT	11	Moon 1.16° SE of Saturn ; 33° from Sun in morning sky; magnitudes -7.1 and 1.2; occultation
0407.255	Apr	6	SAT	18	Pluto at northernmost declination, -22.61°
0407.858	Apr	7	SUN	9	Moon, Venus, and Neptune within circle of diameter 4.58°; about 18° from the Sun in the morning sky; magnitudes -6, -4, 8
0407.875	Apr	7	SUN	9	Moon 0.47° ESE of Neptune; 20° from Sun in morning sky; magnitudes -6.1 and 8.0; occultation
0408.208	Apr	7	SUN	17	Moon 0.51° NNE of Venus ; 15° from Sun in morning sky; magnitudes -5.6 and -3.9; occultation
0408.240	Apr	7	SUN	17:46	Moon at perigee; distance 56.26 Earth-radii
0409.013	Apr	8	Mon	12	Moon at ascending node; longitude 15.6°
0409.265	Apr	8	Mon	18:22	New Moon ; beginning of lunation 1253; total eclipse of the Sun
0409.646	Apr	9	Tue	4	Moon 1.97° SE of Mercury; 5° and 6° from Sun in evening sky; magnitudes -4.6 and 4.5
0411.313	Apr	10	Wed	20	Moon 3.8° NNW of Jupiter; 28° from Sun in evening sky; magnitudes -6.8 and -2.0
0411.332	Apr	10	Wed	20	Venus at southernmost latitude from the ecliptic plane, -3.4°
0411.342	Apr	10	Wed	20	Moon, Jupiter, and Uranus within circle of diameter 3.84°; about 29° from the Sun in the evening sky; magnitudes -7, -2, 6
0411.375	Apr	10	Wed	21	Mars 0.44° NNW of Saturn ; 37° from Sun in morning sky; magnitudes 1.2 and 1.2
0411.438	Apr	10	Wed	23	Moon 3.4° NNW of Uranus; 30° from Sun in evening sky; magnitudes -6.9 and 5.8
0412.083	Apr	11	Thu	14	Moon 0.41° SE of Pleiades; 39° and 38° from Sun in evening sky
0412.457	Apr	11	Thu	23	Mercury at inferior conjunction with the Sun; 0.584 AU from Earth; latitude 3.09°
0412.481	Apr	11	Thu	24	Mars at southernmost latitude from the ecliptic plane, -1.8°
0414.438	Apr	13	SAT	23	Moon 4.3° N of M35 cluster; 68° from Sun in evening sky; magnitudes -9.2 and 5.3
0415.618	Apr	15	Mon	3	The equation of time is 0
0415.854	Apr	15	Mon	9	Moon 4.8° S of Castor; 85° from Sun in evening sky; magnitudes -9.9 and 1.5
0416.104	Apr	15	Mon	15	Moon 1.49° S of Pollux ; 88° and 87° from Sun in evening sky; magnitudes -10.0 and 1.2

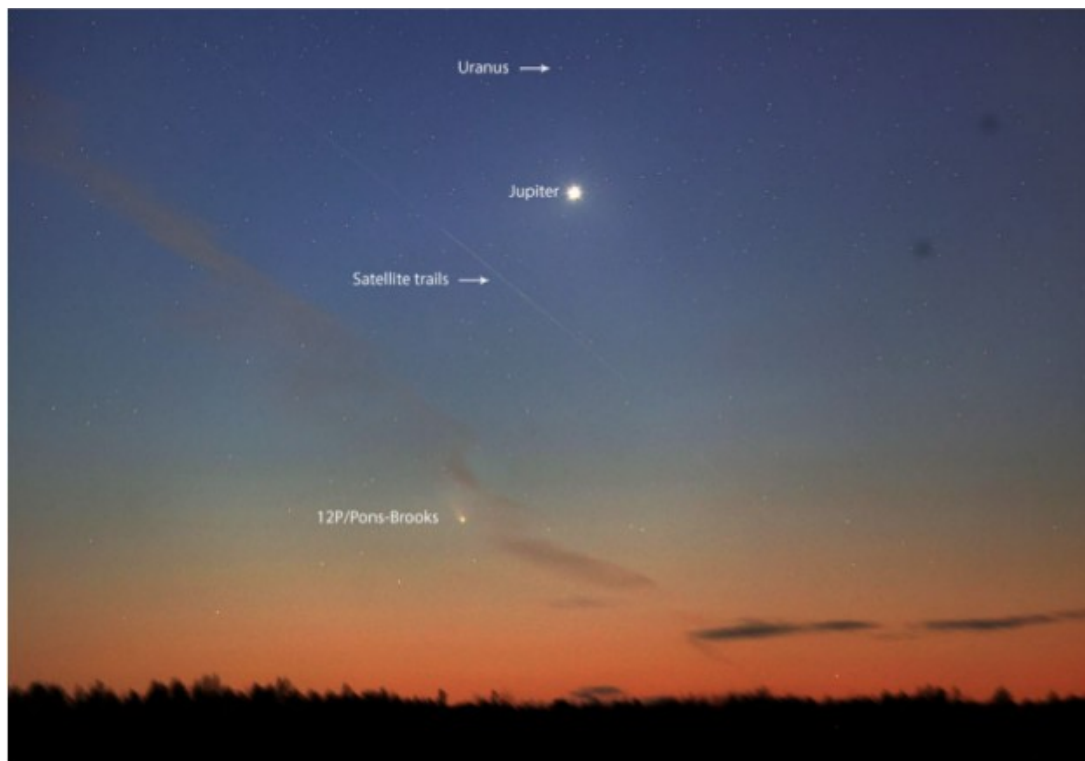
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SAC Observing

0416.301	Apr	15	Mon	19:13	First quarter Moon
0417.250	Apr	16	Tue	18	Moon 3.6° NNE of Beehive Cluster; 101° and 100° from Sun in evening sky; magnitudes -10.4 and 3.7
0419.146	Apr	18	Thu	16	Moon 3.3° NNE of Regulus; 121° from Sun in evening sky; magnitudes -11.0 and 1.4
0419.218	Apr	18	Thu	17	Sun enters Aries, at longitude 29.16° on the ecliptic
0420.042	Apr	19	Fri	13	Mercury 1.66° NNW of Venus; 12° from Sun in morning sky; magnitudes 3.1 and -3.9
0420.081	Apr	19	Fri	14	Sun enters the astrological sign Taurus, i.e. its longitude is 30°
0420.583	Apr	20	SAT	2	Moon at apogee; distance 63.60 Earth-radii
0420.801	Apr	20	SAT	7	Mercury at descending node through the ecliptic plane
0421.646	Apr	21	SUN	4	Jupiter 0.51° SE of Uranus; 20° from Sun in evening sky; magnitudes -2.0 and 5.8
0422.5	Apr	22	Mon	0	Lyrid meteors; ZHR 18; 2 days before Full Moon
0422.948	Apr	22	Mon	11	Moon at descending node; longitude 195.7°
0423.688	Apr	23	Tue	5	Moon 1.29° NE of Spica ; 171° and 170° from Sun in evening midnight sky; magnitudes -12.4 and 1.0
0424.493	Apr	23	Tue	23:50	Full Moon
0424.849	Apr	24	Wed	8	Mercury stationary in right ascension; resumes direct motion
0426.036	Apr	25	Thu	13	Mercury stationary in longitude; resumes direct motion
0427.396	Apr	26	Fri	22	Moon 0.49° ENE of Antares ; 146° and 147° from Sun in morning sky; magnitudes -11.8 and 1.0; occultation
0429.708	Apr	29	Mon	5	Mars 0.04° SE of Neptune; 40° and 41° from Sun in morning sky; magnitudes 1.1 and 7.9; quasi-conjunction
0431.177	Apr	30	Tue	16	Mercury at aphelion; 0.4667 AU from the Sun

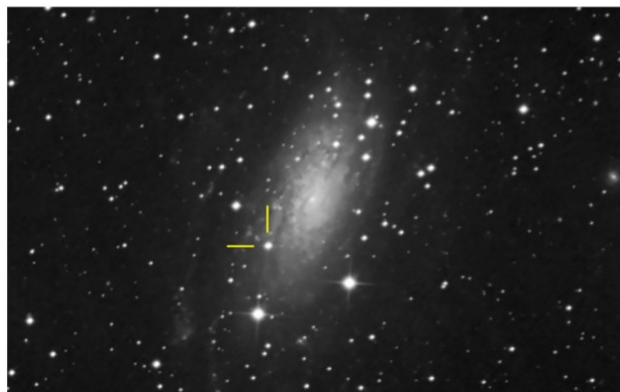
SAC Sky



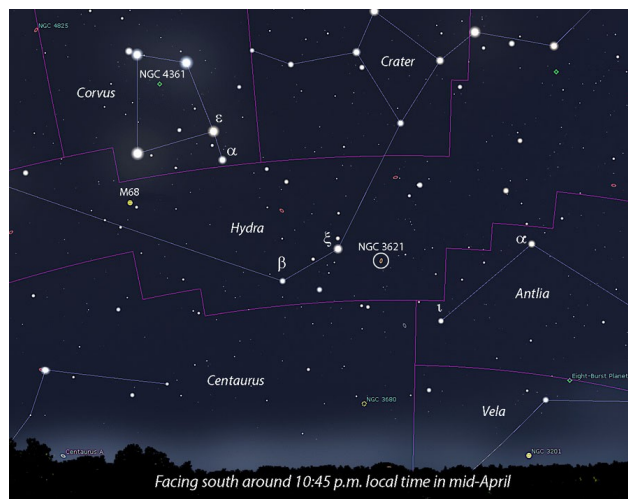
On April 14, Comet 12P/Pons-Brooks appeared 3.2° below Jupiter and Uranus 1.2° above it 75 minutes after sunset. Jupiter is still easy to see low in the western sky at dusk.

Bob King

SUPERGIANT SUPERNOVA



Tick marks show the location of SN 2004ggi in the spiral galaxy NGC 3611 in Hydra on April 11, 2024. The 9.6-magnitude galaxy is located at right ascension $11^h 18.4^m$, declination $-32^\circ 50.3'$. It culminates around 10:45 p.m. local time in mid-April. North is up.
Elot Herman



Facing south around 10:45 p.m. local time in mid-April

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<https://skyandtelescope.org/observing>



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2024 SAC Officers and Contacts

Board Members

President Michael Poppre ([mail to: president@saguaroastro.org](mailto:president@saguaroastro.org))
 Vice-President Steve Rottas
 Treasurer Tom Curry ([mail to: treasurer@saguaroastro.org](mailto:treasurer@saguaroastro.org))
 Secretary Sandy Milward
 Properties Tom Curry ([mail to: properties@saguaroastro.org](mailto:properties@saguaroastro.org))

Non-board Positions

Novice Leader Steve Dodder ([mail to: fester00@hotmail.com](mailto:fester00@hotmail.com))
 Newsletter Rick Rotramel ([mail to: rrotramel601@gmail.com](mailto:rrotramel601@gmail.com))
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 Imaging Al Stiewing ([mail to: amst@cox.net](mailto:amst@cox.net))
 Deep Sky Jack Jones ([mail to: deepskygroup@saguaroastro.org](mailto:deepskygroup@saguaroastro.org))
 Public Outreach Tom Curry (canyonhiker2@cox.net)

SAC on Facebook:

Moderator, Mike Willmoth (mwillmoth@compuserve.com)

2023 Board Mtgs:

January, TBA

April, TBA

July, TBA

November, TBA

Occultation Info

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

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

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



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.

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.

Saguaro Skies Staff

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

2013-2024 Contributors: Bob Christ, Mike Collins, AJ Crayon, Tom Curry, Paul Dickson, David Dillmore, Steve Dodder, Richard Harshaw, Dean Ketelsen, Kevin Kozel, Joan McGue, Andrew Perry, Tom & Jennifer Polakis, Michael Poppre, Jimmy Ray, Rick Rotramel, Steve Rottas, SAC Imagers & Observers, Darrell Spencer & Rick Tejera.



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Saguaro Astronomy Club Membership Services

Membership -- Memberships are for the calendar year and are pro-rated for new members as follows:
Jan - Mar: 100%; Apr - Jun: 75%; Jul - Sep: 50%; Oct - Dec 25%.

- \$32.00 Individual Membership
- \$36.00 Family Membership



Note: You can now pay with PayPal through the SAC Website. Click Below:

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**SAC Treasurer
1238 E. Orchid Lane
Phoenix, AZ 85020**

AZ-Observing.groups.io (Email discussion list)

AZ-Observing is NOT a SAC mailing list, but it's a discussion mailing list about amateur observing in Arizona.

It's an open list for those interested in astronomical observing in Arizona. Messages to the list membership must be sent to az-observing@groups.io

Subscribing: Go to Groups.io, search for the group AZ-observing (or "AZ Observing"). 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 AZ-observing+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 AZ-observing+help@groups.io

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Alternatively, use this link:

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<http://saguaroastro.org/newsletter/>