

THE OBSERVER

VOLUME 39 ISSUE 3



[Moon Occults The Pleiades - Kevin O'Donnell](#)

UPCOMING EVENTS:

- GRCO Monthly Star Party - Mar. 14th
- EVAC Monthly Club Meeting - Mar. 21st

For more details, and to see all of the upcoming club events, check out the [events page](#) on our website or the [Calendar](#) page of this newsletter.

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From the Desk of the President

by Steve Bradshaw

Have you been enjoying the planetary parade these past couple of months? I certainly have and I hope you have been too. It is not unusual to have more than one planet overhead in the night sky at the same time. What is less common is to have six planets overhead at the same time and that is exactly what we have enjoyed this past January and February. In fact, if you were able to look up on the morning of February 28th, Mercury joined the other six planets to show us all seven planets. If you looked down at your feet too then you saw all eight planets. How cool is that? I am sad to see it end.

The news media got the public excited about the parade of planets too. Each weekend at GRCO, as well as at our public star parties, people wanted to see and know more about “the plan-

etary alignment.” Teachable moments were easy when all we had to do was look up and use our lasers to point out the naked-eye-visible planets. Those planets were spaced out in such a way that made the ecliptic plane and zodiacal path easy to visualize across the sky. But a telescope revealed so much more.

Let me just say it straight, I loved showing the sky to the public through my telescope these past two months. I have always enjoyed showing people the “big ticket” planets like Saturn, Jupiter, and Mars. They are large enough and close enough to reveal some detail. People love seeing them, particularly Saturn with its rings. But over these past two months I found myself showing people the “smaller ticket” planets like Neptune, Uranus, and Venus.

From the Desk of the President

by Steve Bradshaw

Continued from page 1

One of the big surprises to me was the level of public interest in seeing Neptune. If you have seen Neptune in an eyepiece then you know that it is a very small, dim, pale-blue, featureless disc. Honestly, it's not much to look at. But I found that people got interested and just wanted to stare at Neptune when I drew attention to four facts. I pointed out the novelty that it is the last planet in the solar system, is around 3 billion miles away, is so large that 57 earths could fit inside it, and only a very small percentage of the population have seen Neptune in real-time with their eyes. Once they understood these facts, they were able to appreciate that very small, pale-blue disc. They could recognize and understand the great distance involved and that even finding or being able to view Neptune is an amazing thing. And many were amazed.

Venus was my next surprise. We often show Venus at GRCO because it is bright enough to view before sunset. But Venus can sometimes be a bit underwhelming when viewed in an eyepiece. As many know, Venus is enshrouded in a thick and highly reflective atmosphere. That atmosphere renders Venus as a very bright, featureless blob in an eye-

piece. However, Venus has a trick up its sleeve and that trick was on full display this past month. Venus was in its crescent shape phase due to the relative orbital positions of the Sun, Venus, and Earth. I found that if I showed my guests how to hold out their fists to illustrate those relative positions then they expected to see a crescent shape. When they looked and saw their predicted crescent in the eyepiece it provided them with the "wow" factor. They knew what they were seeing and why. It made Venus fun to look at because the guests walked away very happy and satisfied.

The planetary parade is winding down now and I will miss it. The good news is that it will return in the summer of 2026. In fact, on July 14, 2026, Jupiter and Saturn will have their closest conjunction since the year 1603. I would imagine that we all might like to see that so let's hope for clear skies.

Until next month enjoy looking up, learning, and connecting with others,
Steve

First Quarter Moon on March 6th at 9:31 AM

Full "Worm" Moon on March 13th at 11:54 PM

Third Quarter Moon on March 22nd at 4:29 AM

New Moon on March 29th at 3:57 AM

EVAC Outreach Events

by Alice Klobe

March Outreach Events:

- March 1st - 7:00pm - 8:30pm - Superstition Sleepover at Prospector Park
- March 6th - 6:30pm - 8:00pm - Playa Del Rey Elementary School
- March 11th - 7:00pm - 8:30pm - CCMC - Fulton Homes At Cooley Station HOA
- March 14th - Sundown - 9:30pm - EVAC/GRCO 2nd Friday Star Party

Details for star parties can be found on the EVAC website [events page](#).

To volunteer for a star party, first sign up [here](#) to be added on the mailing list. Updates, reminders, etc. associated with outreach events are done via email.

The East Valley Astronomy Club Observing Programs

Are you a beginning observer who is unsure of where to aim your telescope? Have you located a few of the brighter deep sky objects, but are not sure where to go from there? Tired of spending good clear nights wandering aimlessly among the stars?

The EVAC Observing Programs offer a great way to sharpen your observing skills while learning more about the night sky. The process also provides structure and challenge in your observing sessions.

Program Details

By successfully completing any of these programs, club members will earn a plaque from EVAC. Some programs may also meet the requirements for Astronomical League certification. The East Valley Astronomy Club invites all interested amateurs to participate in these observing programs, however formal recognition is only available to club members.

Whatever your level of observing expertise, EVAC has a program to suit you. Everyone benefits from participation in an organized observing program!

Getting Started

Getting started on any of the EVAC Observing Programs is as easy as 1 ... 2 ... 3 ... 4...

1. Select the program in which you would like to participate, click on the link and print out the information.
2. Observe all objects on the list either visually or with a CCD camera or any combination of the two, or both. If the observations are done visually, record your impressions in a journal. Include as much detail as possible. [Click here to get the generic EVAC Observation Log form](#). Specific log forms are available within each observing program below.
3. When you have finished the list, submit the completed observing log (or a copy thereof) to the EVAC Observing Programs Coordinator. If your observations are done with a CCD camera, please submit your images in addition to the EVAC observing log.
4. After verification, you will receive a small plaque suitable for mounting on your telescope.

Listed below are some of the more popular of the 22 separate observing programs on the [EVAC website](#):

[Messier Program](#)

New to deep sky observing? This program contains 110 of the brightest and the best objects in the sky.

[Herschel 400 Program](#)

An advanced program for the more experienced visual observer.

[EVAC 200 Program](#)

Follow-up to the Messier program - more challenging in the number of objects and difficulty of the objects.

[Herschel II Program](#)

Another advanced program for the more experienced visual observer.

[Binocular Messier Program](#)

A wonderful way to observe the Messier objects in their proper context in the night sky.

[Double Star Program](#)

Aims to introduce observers to 100 of the finest double and multiple stars in the sky.

[Lunar Program](#)

Well suited for both the beginner and the accomplished observer.

[Arp Galaxy Program](#)

Includes a list of 72 galaxies from the Arp Catalog of Peculiar Galaxies.

[NGC Finest Program](#)

Challenging list of 110 objects not included in the Messier catalog.

[Edge-On Galaxy Program](#)

Contains a list of 47 galaxies viewed from the side.

Deep Sky Imaging Target Highlights for March 2025

from starwalk.space

The average low [temperature](#) for March in the Phoenix metro area is 53° F. March 29th is a new moon with astronomical dusk at 8:08 PM and astronomical dawn at 4:52 AM, giving us 8 hours and 44 minutes of imaging time that night.

Many consider this month to be the start of “Galaxy Season” (March through May) as many deep sky objects position themselves high in the night sky. StarWalk has identified 5 galaxies, 5 nebulae, and 4 star clusters that make fantastic targets to explore in March. Below is a list of Northern Hemisphere targets with links to more information.

Deep Sky Object and Link	Apparent Magnitude	Constellation	How to Observe
NGC 2903	9.0	Leo	In 10x50 binoculars, NGC 2903 will appear as a tiny smudge. A four- to six-inch telescope can help you see more details.
NGC 2403	8.9	Camelopardalis	NGC 2403 is bright enough to be seen with large binoculars. A small telescope can help you see the galaxy's spiral structure.
Cigar Galaxy	8.41	Ursa Major	M82 might be challenging to spot with binoculars, but it's still possible. It will look like a tiny smudge of light (with a brighter smudge, the M81 galaxy, nearby). It's better to use an 8-inch telescope to observe the Cigar Galaxy.
Pinwheel Galaxy	7.9	Ursa Major	Under dark skies, you can easily observe the Pinwheel Galaxy with 10x50 binoculars. Some astronomers even say this galaxy is easier to find with binoculars than with a telescope.
Bode's Galaxy	6.9	Ursa Major	M81 is bright enough to be seen with a pair of binoculars. A minimum of an 8-inch telescope is required to see the galaxy's structure.
Jellyfish Nebula	12.0	Gemini	With binoculars, only the brightest portions of the nebula might be detectable from an exceptionally dark location, but even then, it is barely visible. A high-quality telescope with a nebula filter is necessary to make out its structure.
Owl Nebula	9.9	Ursa Major	of its small size and faint magnitude, the Owl Nebula is extremely difficult to spot with binoculars. You should use at least a three- or four-inch telescope to observe it.
Rosette Nebula	9.0	Monoceros	With binoculars, you can easily spot the star cluster within the nebula. A small telescope under dark skies will reveal a faint, hazy cloud of gas.
M48	5.8	Hydra	Under good atmospheric conditions, the M48 cluster is visible to the naked eye. Almost any binoculars will show you several dozen of its stars.
Beehive Cluster	3.1	Cancer	Under dark skies, the Beehive Cluster can be observed with the unaided eye, however, 10x50 binoculars or a small telescope will help see the cluster more clearly.

EVAC Monthly Club Meeting Minutes - February 21, 2025

by Jeff Foreman

Meeting Minutes

YouTube: Many EVAC monthly meetings can be viewed on YouTube. Just search for the East Valley Astronomy Club on the YouTube website to locate the recordings, or select this [link](#) for the recordings.

Welcome

EVAC president Steve Bradshaw welcomed club members to the meeting and reviewed the agenda. New visitors were recognized and welcomed.

Announcements

- Visitor Recognition: Four new visitors
- We had 78 people in attendance and 28 on the Zoom call
- EVAC Website Highlights (<http://eastvalleyastronomy.org/>)
- Gilbert Rotary Centennial Observatory (GRCO)
 - Friday and Saturday (weather permitting) dusk to 9:30 PM
 - 2nd Friday of every month is the public star party with members telescopes
- Public Outreach Events (Alice Klobe)-new events coordinator
 - Recent Public Star Party Events-Alice shared photos of volunteers at four recent events. Including one at Islands Elementary, with 256 guests in attendance.
 - Explained what happens with these public outreach events.
 - Listed upcoming Public Star Party Events. (Can be found on the [EVAC Calendar](#))
- Club activities
 - 2025 Messier Marathon-2 nights
 - Friday and Saturday, March 28th and 29th.
 - Hovatter Rd off the I-10 near Quartzsite.
 - Friday- Just the marathon
 - Saturday-Swap meet, raffle for prizes, and dinner for \$8.
 - Fountain Hills Dark Sky Festival
 - Saturday March 29, 4pm-9pm
 - Volunteers from the club are welcome to go and set their scope for the festival attendees.
- Steve gauges interest in potential ideas for additional club activities.
 - A trip to UofA mirror fabrication lab in Tucson? (~\$25)
 - A trip to the Discovery Center at Lowell in Flagstaff? (~\$35)
 - A trip to the Mt Graham observatories? (~\$75, or \$60 for 60+)

Member Presentation: M31- Something Different (Mike Wiles)

Mike discussed his attempt to recreate Edwin Hubble's 1925 experiment of determining the distance to M31 using a variable star. He explained how Henrietta Swan Leavitt's work on Cepheid variables was crucial for Hubble's calculations. His presentation included photographs of his 14" telescope and a CMOS camera and data analysis he observed. Mike's calculations were close to Hubble's original estimate and reasonably close to the modern accepted distance. The experiment shows meaningful astronomical observations can be made with amateur equipment.

Feature Presenter: All about Asteroids (Tom Polakis)

Tom gave a presentation about asteroids. Several topics were discussed including, their discovery, orbits, naming, photometry, radar imaging, occultations, binary asteroids, spacecraft visits, near-Earth asteroids, and meteors/meteorites.

GRCO Whirligigs

by Claude Haynes

We had a serious pigeon problem at the observatory due to excessive feeding of the wildlife. **Don Wrigley** bravely scaled the ladder to install whirligigs, with **Steve Bradshaw** and **Claude Haynes** providing bracing at the bottom. The naturalist reported the pigeon population had recently doubled and was becoming a maintenance issue. There is ample natural food available to the wildlife. Geese are notorious con artists.



Used Equipment For Sale at Great Prices

The East Valley Astronomy Club (EVAC) has used astronomy equipment for sale. Please note that equipment sales are **“as is”** and are **“pick-up only”**.

For more details and to answer any questions, contact the EVAC Property Director, James Yoder (properties@evaonline.org) or visit the EVAC Sales webpage [HERE](#). This page includes a brief description of the items, photos and reference materials (e.g. users manuals, etc.).

Equipment being offered for sale this month includes:

- [Thousand Oaks Type 2 Solar Filter ID=308mm](#) (Sale Price = \$100)

Non-EVAC Equipment for Sale (This is mostly member sales, EVAC is neither responsible for, nor endorses this equipment).

- [12.5" f/5 Dobsonian](#) (Brooks Scofield) Sale Price = \$800



SkyPi Remote Observatory

The darkest, most Pristine, sky in the continental U.S. !

At the site: Bathroom facilities, running water, 5 pads w110v, wifi, acres of grassy camp sites.

From the site: Very Large Array 42mi E, The Astronomical Lyceum 55mi E, MRO Observatory 80mi East.

Webcam imaging made easy!

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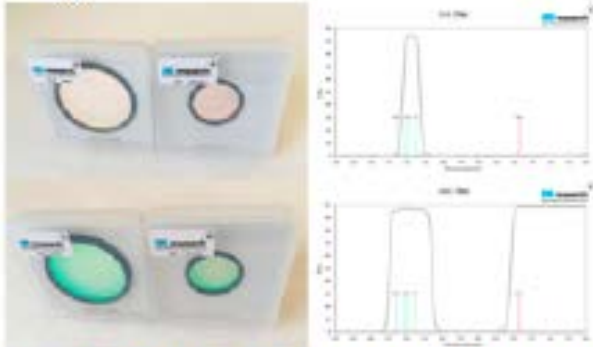
Apache-Sitgreaves Observatory

Overgaard, Arizona

Largest Public
Observing
Telescope
in
Arizona



Critical products for visual observing, too!



A-S Research Nebula Filters: See More Nebulosity!

The complex block contains the main title and location, a photograph of a man sitting next to the massive telescope, and a section for nebula filters. The filter section shows four filters in their packaging and two spectral graphs. The graphs show intensity versus wavelength, with specific emission lines highlighted in green and red.

www.apache-sitgreaves.org

Monthly Meetings will be held in person and also presented live online using Zoom. See the EVAC Website for updates.

The monthly general meeting is your chance to find out what other club members are up to, learn about upcoming club events and listen to presentations by professional and well-known amateur astronomers.

Our meetings are held on the third Friday of each month at the Southeast Regional Library in Gilbert. The library is located at 775 N. Greenfield Road; on the southeast corner of Greenfield and Guadalupe Roads. Meetings begin at 7:00 pm.

Meetings are also available online via Zoom.

Visitors are always welcome!



Southeast Regional Library
775 N. Greenfield Road
Gilbert, Az. 85234



March 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

March 1st - Superstition Sleepover Star Party - 7-8:30 PM

March 6th - Playa Del Rey Elementary Star Party- 6:30-8 PM

March 11th - CCMC - Fulton Homes At Cooley Station HOA- 7-8:30 PM

March 14th - EVAC/GRCO Public Star Party - Sunset-9:30 PM

March 21st - EVAC Monthly Meeting 7-9 PM

April 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

April 3rd - Leading Edge Academy Mesa Star Party - 6:30-8 PM

April 11th - EVAC/GRCO Public Star Party - Sunset-9:30 PM

April 18th - EVAC Monthly Meeting 7-9 PM

April 24th - Pinal Co. Govt. Star Party - 7:30-8:30 PM

East Valley Astronomy Club - 2024 Membership Form

Member Dues (Based on the month you are joining the club)

	Individual	Family	Student (18yr+ with ID)
January - June	\$30.00	\$35.00	\$20.00
July - December (<i>Renew in January</i>)	\$15.00	\$20.00	\$10.00
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Renewal Dues (Current Members Only)

Astronomical League: \$10.00 Annually:

Individual	Family	Student (18yr+ with ID)
\$30.00	\$35.00	\$20.00
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name Badges: Quantity: _____

\$10.00 Each

Name to imprint: _____

Total amount enclosed:

Please make check or money order payable to EVAC.

Payment will be made using PayPal:

Name:

Phone:

Address:

Email:

City
State
Zip

URL
For website:

Would you be interested in our outreach program? Yes No

How did you discover East Valley Astronomy Club?

Liability Release Form

In consideration of attending any publicized Star Party hosted by the East Valley Astronomy Club (hereinafter referred to as "EVAC"), the receipt and sufficiency of which is hereby acknowledged, I hereby affirm that I and any related entities, predecessors, successors, affiliates, attorneys, guarantors, insurers, transferees, assigns, parents, spouses, children, subsidiaries, accountants, officers, directors, employees, agents, shareholders, members, and trustees, past and present, hereby forever release, acquit and discharge to hold EVAC and its related entities, predecessors, successors, affiliates, attorneys, guarantors, insurers, transferees, assigns, parents, spouses, subsidiaries, accountants, officers, directors, employees, agents, shareholders, members, and trustees, past and present, from any and all causes of action, claims, losses, damages, liabilities, expenses (including attorneys' fees) and demands of any nature whatsoever, known or unknown, that in any way relate to, arise out of, or concern EVAC and/or my presence on the premises of any EVAC Star Party and related areas, whether or not those causes of action, claims, damages, liabilities, and demands are part of the specific subject matter of EVAC or any EVAC Star Party. This release is intended to and does cover all injuries and damages, and the consequences thereof, whether known or unknown at the time of the execution of this release, which have occurred or may hereafter occur or which may hereafter be discovered, and which may have been caused or may be claimed to have been caused by the said incident, and specifically includes, but is not limited to, bodily injuries, mental and emotional injury, pain and suffering, medical treatments, and loss of earnings or income.

My signature upon this form also indicates agreement and acceptance on behalf of all minor children (under 18 years of age) under my care in attendance. EVAC only recognizes those who are members or invitees and who also have a signed Liability Release Form on file as participants at an EVAC Star Party.

Signature _____

Date _____

Find Out What's Happening – Join EVAC-Announce List

If you would like to receive email announcements about EVAC meetings and activities, please join the EVAC–Announce mailing list. Click on the link below to subscribe. Enter your full email address in the box titled User Options and press OK. You will receive a confirmation email. Your privacy is respected by EVAC and we will never sell your email address, or use it for non-club relevant solicitations. This mailing list is designed for communication from EVAC, and does not enable users to respond to the message. If you wish to contact club officers, please use the list in the Contact-Us area on the Home page of our EVAC website. To subscribe to the EVAC–Announce mail group click: <http://www.freelists.org/list/evac-announce>. To unsubscribe use the same link, enter your email address and select Unsubscribe from the “Choose An Action” list. Another list to consider is AZ-Observing@groups.io, simply click on this link <https://groups.io/g/AZ-Observing> and follow the instructions. EVAC also has a Facebook Group where members may share ideas, photos, and Astronomy related information. Click on the link to join: [East Valley Astronomy Facebook Group](#).

The Gilbert Rotary Centennial Observatory (GRCO) also has a Facebook Group. To visit, please click on [Gilbert Rotary Centennial Observatory - GRCO](#). The Observatory is open on Friday and Saturday from sunset until 9:30pm. We need volunteers. Training is provided. Help us engage the community in the wonders of the night sky. Email gco@evaonline.org for information.

The Observer is the official publication of the East Valley Astronomy Club. It is published monthly and made available electronically as an Adobe PDF document the first week of the month. Please send your contributions, tips, suggestions and comments to the Editor at: news@evaonline.org. Contributions may be edited. The views and opinions expressed in this newsletter do not necessarily represent those of the East Valley Astronomy Club, the publisher or editor.

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The East Valley Astronomy Club is a 501(c)(3) nonprofit charitable organization.

www.evaonline.org

East Valley Astronomy Club
PO Box 2202
Mesa, Az. 85214-2202

President: Steve Bradshaw

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