

THE OBSERVER

VOLUME 39 ISSUE 2



[NGC 2359 Bernard Miller Astrophotography](#)

UPCOMING EVENTS:

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

For more details, and to see all of the upcoming club events, check out the [events page](#) on our website or the [Calendar](#) on Page 10 of this newsletter.

INSIDE THIS ISSUE:

From the Desk of the President

by *Steve Bradshaw*

Last month I wrote about the goal of trying to provide more social opportunities for all of us to get together as club members. I am happy to say that we got off to a good start with January's ASU Planetarium Pizza Party event. A total of 86 people attended the four-hour event. We were able to take guided tours of the space science displays at the ASU Marston Theater. Then we ate lunch together in a beautiful park area adjacent to the theater. We finished the day by watching a very entertaining and interesting 3-D planetarium show. It might have been a cloudy day outside, but inside the theater we had clear skies and a great view of the universe. My favorite part was the view of the three satellite layers orbiting above the Earth. There is an awful lot of equipment buzzing around up there! It was a wonderful

day, thanks to all who attended. Personally, I would also like to thank all those who pitched in to help with the event-day lunch tasks. You were all awesome and helped to lighten my load.

We are fortunate that Arizona has so many astronomy-related venues and activities in which we can participate. Over the next couple of club meetings, we will be mentioning other ideas for additional social events over the coming year. But please, don't wait for us to mention something. We want your input and participation too. If you have an idea for an event, then please mention it to me or another club staff member and we'll work to see if we can make it happen. We don't have the finances to make every event free to attend, but we can work towards setting

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From the Desk of the President

by Steve Bradshaw

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events up and getting group discounts when available. An event could be for 10 people or for 100. For example, one suggestion has been an afternoon picnic at Peralta Regional Park followed by an evening star party for those who want to stick around and do some viewing afterwards.

One last mention about meeting and getting to know each other. Please also consider getting involved with our public outreach events as these events do more than just support the club's public education goals. These events also provide unstructured and enjoyable social time around a group activity. I attended the club meetings for several months but found it difficult to build friendships when I only met people once a month for a few minutes. It was

when I got involved with public outreach that I began to get to know other club members. It was meeting people a few times each month that was the key to start developing friendships. Frequency is critical to building friendships.

However we accomplish it, my hope is that each of us will make an effort to broaden our circle of friends this year. Science, technology, and the universe are awesome, but it is often our relationships that make life worth living.

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

Steve

First Quarter Moon on February 5th at 2:02 AM

Full "Snow" Moon on February 12th at 7:53 AM

Third Quarter Moon on February 20th at 11:32 AM

New Moon on February 27th at 6:44 PM

EVAC Outreach Events

by Alice Klobe

February Outreach Events:

- 2/4 - Power Ranch HOA Star Party - 7-8:30 PM
- 2/6 - Islands Elementary School - 6:30-7:30 PM
- 2/11 - American Leadership Academy - 6:30-8:15 PM
- 2/14 - EVAC/GRCO Public Star Party - Sunset-9:30 PM
- 2/26 - San Tan Valley Library Star Party - 7-8:15 PM

Details can be found on the EVAC website - www.evaconline.org/events-meetings. Click on the calendar entry for location and times. Contact [Alice Klobe](#), (EVAC's Events Coordinator), if you can volunteer at an event. It is helpful to know who is coming so we can tell you where the observing field is located and how to gain access.

The Backyard Astronomer - My Top Ten Celestial Delights

by Bill Dellinges

This month marks 70 years of stargazing for me. It all started in 1955 when I was 12 years old. I was fascinated by the black and white plates of planets, stars, nebulae and galaxies in Fred Hoyle's *Frontiers of Astronomy*, a book I discovered in the school library. I talked my father into buying me a Criterion 4", F-11 reflector I saw advertised in a *Mechanics Illustrated* magazine.

Over the years I observed various types of objects and naturally had my favorites. Recently I noticed at public star parties I would occasionally comment to an observer peering into my telescope, "I would definitely put this object in my top ten list of astronomical targets." So, what exactly would be my ten best objects – I really had no such list! It's time to fix that now. The list had to be not just perennial favorites, but the ten most impressive objects I've seen – ones that hit you in the gut. Because there are so many deserving objects out there, I include another ten runner-up objects worthy of your attention. Here we go!

1) The Moon: Outstanding. No other object in the universe reveals as much detail in a telescope. And every time I observe it, I see something I've never noticed before.

2) Total Solar Eclipse: (Mexico, 1991, Aruba 1998). It's hard to describe this unearthly, breathtaking sight. Don't forget to examine the diaphanous corona with binoculars.

3) Jupiter: Rewarding in just about any telescope. Never fails to excite the observer, from its cloud bands, Great Red Spot (well, not so great currently) and four major moons, Io, Europa, Ganymede and Callisto. Watch them change configuration from night to night. See a moon's shadow move across the planet!

4) Saturn: Its rings seal the deal. Even laypersons express amazement at the view.

5) The Pleiades: The "Seven Sisters" star cluster in Taurus is probably the finest star cluster in the night sky. Though visible to the unaided eye, it's best appreciated in binoculars.

6) M44: The Beehive Star Cluster in Cancer. Twice the distance as the Pleiades, its stars are fainter, thus best seen in

binoculars or low power telescope. In a reasonably dark sky, the unaided eye can spot the cluster as a nebulous patch of light in the void between Gemini and Leo.

7) M42: The Orion Nebula in the Sword of Orion. Gorgeous! The finest example of an emission nebula in the northern skies. A bonus is the Trapezium, a tight knot of four stars (A, B, C, D) at the heart of the nebula – can you split them? Can you detect the fainter E and F components?

8) M27: Planetary Nebula in Vulpecula. Because it is big and bright for a planetary nebula (8'x4'), the "Dumbbell Nebula" is visually the most rewarding planetary nebula in the night sky (about 8 degrees southeast of Albireo in Cygnus). Only downside is that its central star (CS) is magnitude 14 and difficult to see. If you need a CS fix, check out NGC 2392 (Gem), NGC 6543 (Dra) or NGC 6826 (Cyg). Their CS's magnitudes are 10.5, 11, and 10.4 respectively.

9) The Double Cluster in Perseus: Two beautiful open star clusters next to one another, like a sprinkling of diamonds on black velvet. To get the best "framing" of the vista, you'll need an eyepiece that gives you a 2-degree real field. My favorite view is through my tripod mounted 28x100 binocular (with its 2.5-degree field). A 16x70 (4-degree field) binocular (also tripod mounted) offers a pleasing view as well.

10) M13: This globular star cluster in Hercules is considered the best globular cluster in the northern sky. It doesn't hurt that it can be nearly overhead when it transits, improving its visual appearance. Imagine a spherical grouping of perhaps half a million stars. Awesome in an 11" telescope with an Ethos 1000 eyepiece at 215x.

There you have it, my top ten is finally established.

My ten runner-up objects are: M7 (Sco), M5 (Ser), M11 (Sct), M31 (And), M41 (CMa), M57 (Lyr), Epsilon Lyrae (Lyr), M81/82 (UMa), M35 (Gem), and The Hyades Cluster (Tau), basically the V-shaped "Face" of the Bull. You'll need a binocular with at least a 7-degree apparent field to appreciate this beauty. This is an overlooked object not to be missed.

Deep Sky Imaging Target Highlights for February 2025

by James Yoder

The average low [temperature](#) for February in the Phoenix metro area is 49° F. February 27th is a new moon with astronomical dusk at 7:36 PM and astronomical dawn at 5:48 AM, giving us 10 hours and 12 minutes of imaging time that night.

In this month's list there are over 128 object/configuration combinations provided of just about every class of deep sky object including 7 Globular Clusters, 15 Planetary Nebulas, 26 Nebula, 7 Dark Nebula, 13 Open Clusters and 60 Galaxies/Galaxy Clusters.

Bright Moon Targets (Moon) – These are small targets that have a high surface brightness, these would be globular clusters and planetary nebula, that with appropriate narrowband filters can likely be imaged even in a near full moon situation.

The [Prospective Imaging Objects guide](#) (PDF download) covers objects that reach their highest point in the sky and crosses the meridian (aka transit) sometime between astronomical dusk to dawn. We will be highlighting objects that transit roughly between 10 PM and 2 AM when possible. This ensures maximum imaging time over the month.

Happy Hunting!

Some Highlighted Targets (Most of these objects were imaged in Chandler)

Configuration	Page	Object(s)	Type	ImageLink
Hyperstar	33	Bodes & Cigar Galaxies (M81 & M82)	Galaxies	169 min
Hyperstar	39	M108 & M97	Galaxy and Planetary	147 min
Primary Focus	28	Thor's Helmet (NGC-2359)	Nebula	50 min
Primary Focus (Moon)	28	Candy Wrapper (NGC-2371)	Planetary Nebula	204 min
Primary Focus	30	NGC-2403	Galaxy	256 min
Primary Focus (Moon)	30	M-46	OC and PN	Unknown

Resources:

- [ArtCentrics.com](#) – [Potential Targets Guide](#) (PDF download)
- [Telescopius](#) – Lookup objects, plan imaging session.
- [Field of View Calculator](#) – Test different telescope, camera & eyepiece combinations.
- [Astrometry.net](#) – Solve images captured by your system. Get image RA/DEC, pixel scale, image size, and orientation of the image you have taken.

EVAC Monthly Club Meeting Minutes - January 17, 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 70 people in attendance and 23 on the Zoom call
- EVAC Website Highlights (<http://eastvalleyastronomy.org/>)
 - Joining a distribution list for EVAC announcements can be done [here](#).
 - Joining or renewing membership can be accomplished online [here](#).
 - Anonymous donor has provided money to cover the cost of 10 memberships for anyone 30 and under.
 - The [EVAC Calendar](#) shows what events and meetings are slated for EVAC members.
 - Past newsletters can be accessed [here](#).
 - Used equipment for sale can be viewed [here](#).
 - Equipment that can be rented by members can be viewed [here](#).
- 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 recent events.
 - Explained what happens with these public outreach events.
 - Listed upcoming Public Star Party Events. (Can be found on the EVAC Calendar)
- ASU Planetarium Pizza Party Update
 - Only a week away
 - The event is scheduled for Saturday, January 25th starting at 11:45 AM
 - 122 people have signed up
 - There will be a tour of the displays
 - Lunch is included as well as raffle prizes- (donated from Starizona, West Valley Astronomy Club, and Skywatcher)
 - Options for parking at a cost or for free, depending on the lot.
- From the young Astronomers
 - Steve gets emails from kids in grammar school and junior high who are studying space.
 - They use the EVAC website to learn about astronomy and will suggest websites.
 - This month he received an email about satellites from Ashley for a school project.
 - A screenshot and link of the website was provided:
 - <https://www.ooma.com/blog/telecommunications-satellites-and-space-exploration/>

Member Presentation: Looking back-Astronomy during our lives (Steve Bradshaw)

Steve discussed his inspiration for the presentation. Including the publication of Sky & Telescope's 1,000th Issue. Spanning from 1941 to 2025, 84 years. Steve went through the timeline to look back at what was discovered or accomplishments during "our" lifetimes.

Member Presentation: Update- Intensity Interferometry on Sirius (Tom Mozden)

Tom Mozden and Rick Scott. June 21, 2024- Jan15, 2025

This was a follow up to a part one discussion Tom presented in the June meeting. Tom and Rick got some data in January and February of 2024. They wrote a paper on it and believe it will be accepted in this last round of feedback. There was a discussion about Intensity Interferometry-How it works in a nutshell. Tom explained the procedure using 10" backyard telescopes. Also, shared photos of the equipment as well as charts containing the data collected and the results.

Feature Presenter: My journey in Astronomy outreach (Mark Johnston)

Mark's list of credentials is as follows: VP Phoenix Astronomical Society, NASA Solar system Ambassador, ACEP Astronomy to Chile, Telescope.live Ambassador, Approved Cruise ship speaker on Astronomy and space, Astronomical Master of Outreach, and NASA APOD Astrophotographer.

Mark discussed several topics. Including how he got started and his experience in outreach participating in 120 events last year. Night Vision and how he incorporates technology in his events, speaking on cruises for ten years, and how he became a NASA Ambassador, examples of indoor outreach events to perform when there are clouds, and his involvement in using social media platforms to extend his outreach online-with how to tips. There was also a discussion about Electronically Assisted Astronomy (his preferred method of public outreach). The pros & cons of EAA and what you need to get started. Mark shared his experience with astrophotography, including some of his photos.

Mark's provided links:

<https://www.cloudynights.com/forum/139-night-vision-astronomy/>

<http://pwang.io/hobbies/astro/nightvision/>

<https://telescope.live/tutorials>

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.

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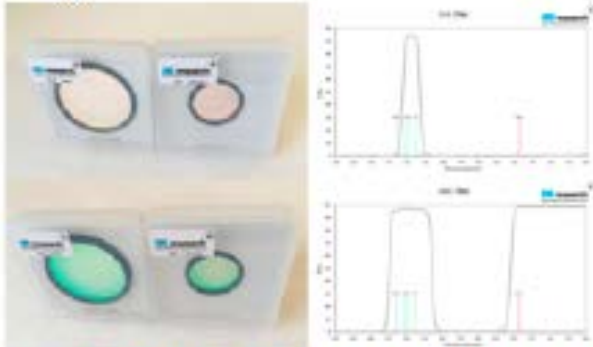
Apache-Sitgreaves Observatory

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 descriptive text, a photograph of a man with the telescope, a sub-header for filters, a photograph of filters and graphs, and a final promotional line.

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



February 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	

February 4th - Power Ranch HOA Star Party - 7-8:30 PM

February 6th - Islands Elementary School - 6:30-7:30 PM

February 11th - American Leadership Academy - 6:30-8:15 PM

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

February 21st - EVAC Monthly Meeting - 7-9 PM

February 26th - San Tan Valley Library Star Party - 7-8:15 PM

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	

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

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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www.evaonline.org

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