Volume 37 Issue 9

September 2023

The Observer

The Cartwheel Galaxy from Webb - APOD August 24, 2022
Image Credit: Nasa, ESA, CSA, STScI, Webb ERO Production Team

Upcoming Events:

EVAC Public Star Party - September 8th
EVAC Meeting - September 15th
Astronomy Day - September 23rd

Inside this Issue:

From the Desk of the President
by Claude Haynes

September already? With the Equinox on September 22 we move into Fall, and the final season of this year. We are beginning to get emails from schools and community groups for star parties. If you haven't participated in these before I highly recommend it. It doesn't take a big telescope; in fact, it is probably easier with a smaller one. On personal viewing nights we usually avoid the Moon, but it is a great object for public events because it gives an easy early target and is always fun to view. We have a dedicated band of volunteers for these events, but we are always looking for more. We try to setup on a basketball court with vehicle access. Sessions usually are only an hour or so, and often are part of a larger science night or Reading Under the Stars. Each volunteer points at an easily viewed object and usually stays on it for the event. In addition to the Moon; planets, bright double stars, and open clusters provide interesting views. Many times, you will encounter folks who have never looked through a telescope, and anything they see is wonderful. In addition to these events, on the 2nd Friday of each month we offer additional telescopes near the observatory for extra viewing. . Send me an email at president@evaconline.org if you would like more information or want to be added to

From the Desk of the President
by Claude Haynes

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to our Outreach mailing list. We are also looking for a coordinator to arrange these events. It is an important task, but also highly rewarding.

Our August meeting was a lot of fun. If you didn't get a chance to see our new meteorite collection, stop by GRCO and take a look. Steve Bradshaw gave a great presentation on measuring distances in space. Check out the recorded ZOOM meeting on our website for some additional content. Our speaker in September is Dr. Paul Knauth who has enjoyed getting out to dark sky spots with his exceeding large Dobsonian telescope following his retirement from ASU. Always a fun talk.

Our October meeting depends upon you. We will have a Swap Meet prior to the meeting and then we are requesting that members give us reports on their viewing of the Annular Eclipse on October 14 and their plans for viewing the Total Solar Eclipse on April 8, 2024. With the October eclipse having a centerline near the Four Corners region we are moving the All Arizona Star Party to the weekend of November 10-11. It will be at our new site north on Hovatter Rd. Mark your calendars. Details to follow.

Keep looking up.

Your President
Claude Haynes

EVAC ZOOM Meeting Minutes for August 18th, 2023 at 07:30 P.M. AZ Time
by James Yoder

Meeting Minutes

YouTube: Note, 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 2023 meeting recordings.

Welcome

EVAC president Claude welcomed club members to the meeting and reviewed the agenda. New visitors were recognized and welcomed. Introduction of Officers and Board for 2023:

- President – Claude Haynes
- Vice President – Woody Sims
- Secretary – James Yoder
- Treasurer – Brooks Scofield
- Board Members: Don Wrigley, Tom Mozdzen, Steve Bradshaw, Alex Beck, David Coshow
- Property Manager: James Yoder
- Webmaster/Newsletter Editor: Marty Pieczonka
- Events Coordinator – (Position is Open)

General Business

Attendance: 50 in attendance; 38 online.
Visitors Recognition: 11 new visitors.
Elections in November: We will have the following positions open for November elections:

- President
- 2 Board Members
- Events Coordinator

Library Telescopes: Three additional telescopes have been added to the library check out program. Equipment currently in the checkout program includes:

- Five 4.5" Dobsonian telescopes
- Three 6" Dobsonian telescopes
- Three Binoculars

GRCO – Open for public viewing Friday & Saturday Sunset – 9:30pm (weather permitting).
Meteorites Collection: Display and case have been completed and will be at the observatory
September Meeting Speaker: Paul Knauth
October Meeting:

- Member presentation on Annular Eclipse
- Member Swap Meet

Upcoming Events:

- 10/14/2023 – Annular Solar Eclipse
- 04/08/2024 – Total Solar Eclipse
- 11/10, 11/11 – All Arizona Star Party will be held.

Gold Canyon - Dark Sky Initiative
Members are encouraged to provide photos or light measurements that may have been taken in this area.

Member Presentation:
Leviathan of Parsons Town Telescope.
Presenter: Michael Poppre

Michael talked about a 72 inch speculum mirror telescope that that was constructed by Williams Parsons in the town of Birr Ireland over a period of three years starting in 1842. The presentation covered the history of the Parson's fam

EVAC ZOOM Meeting Minutes for August 18th, 2023 at 07:30 P.M. AZ Time

by James Yoder

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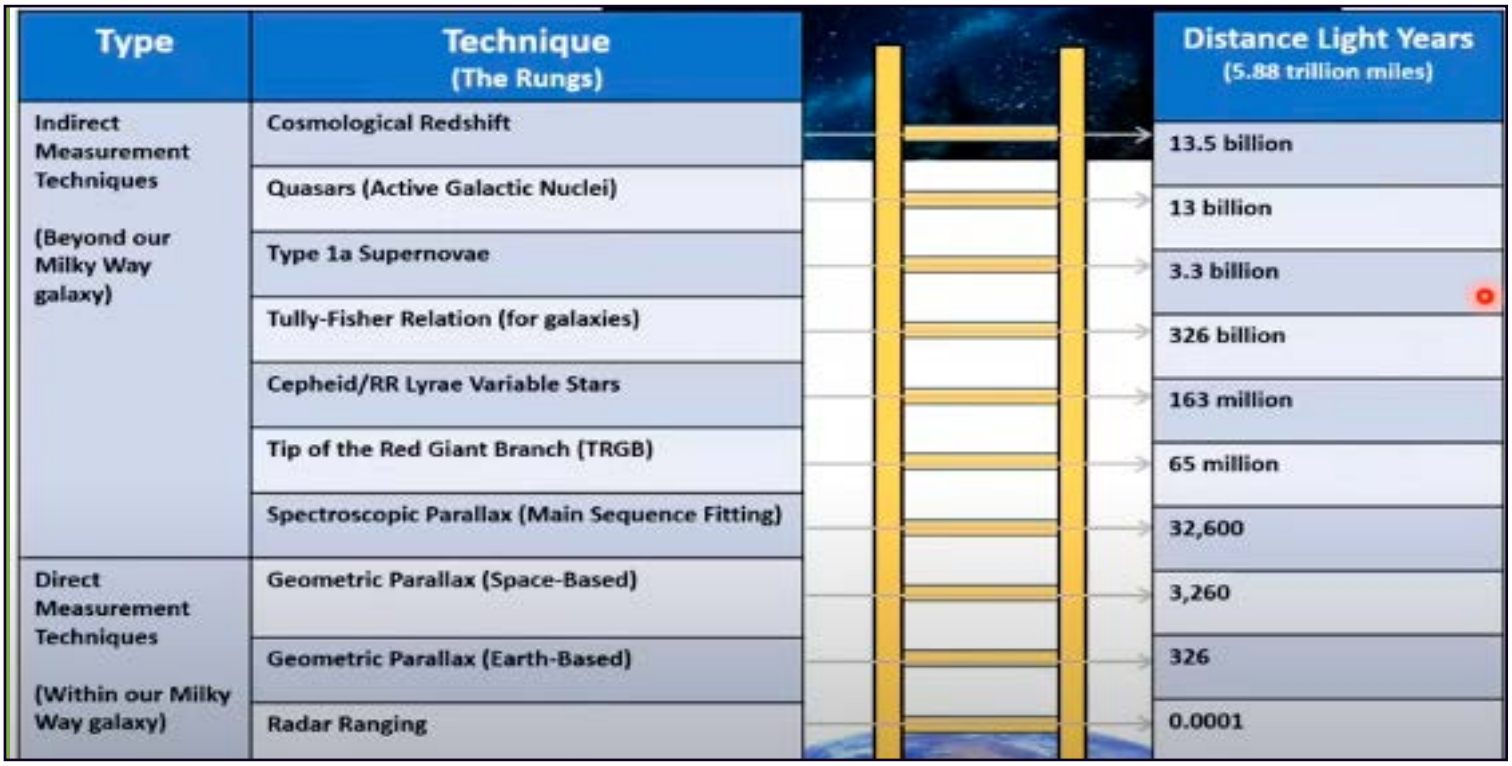
ily and the telescope. See the Meeting YouTube video for details.

Main Presentation: How Far Away Is That?
Presenter: Steve Bradshaw

In Steve's presentation he discussed the different techniques used to measure things. There are 10 methods being utilized to do this. Each of the methods have a specific distance range that the technique can be considered accurate for. These different techniques can be organized into what's called the Cosmic Distance Ladder. The ladder covers a distance from as small as a fraction of a light year to 13.5 billion light years (See below).

The next Monthly Meeting will be September 15th 7:45 pm.



The Backyard Astronomer

by Bill Dellinges

Dellinges' Catalog of Stellar Rich-Fields for Binoculars 5th Edition

This 5th Edition of my personal catalog of large bright star fields (8.3 degrees with my Nikon Monarch HG 8x42) will spotlight impressive areas of bright stars not previously associated with professional catalogs. We will be visiting particularly delightful sections of three constellations, Lyra (Del-13), Cepheus (Del-14) and Cassiopeia (Del-15).

Del-13, Lyra: (Centered on) RA 18h 50m DEC +33°. In the last 4th Edition (August 2023), I described my two Trapeziums A and B in western Hercules. While I was enjoying the view of Trapezium A, I felt the gravitational pull of more stars to the northeast tugging at my binoculars. I followed the stellar breadcrumbs in that direction for only 1.5 binocular fields when I stumbled across a pretty panoply of bright stars. Whoa, what's this? I lowered my glass and realized I was looking at the lower half of Lyra's Parallelogram, free of glare from bright Vega (just out of the field to the north). I was centered on Gamma and Beta Lyrae. I had been here many times seeking M-57, the Ring Nebula, nestled between the two stars; but that was with a telescope with a ½ degree field – I had not seen the big picture all those years. I kissed my binoculars for revealing this deep sky tableau. References: Sky Atlas 2000 Chart 8, Bright Star Atlas 2000 Chart 7, S&T Pocket Sky Atlas Chart 63. (See next page).

The Backyard Astronomer

by Bill Dellinges

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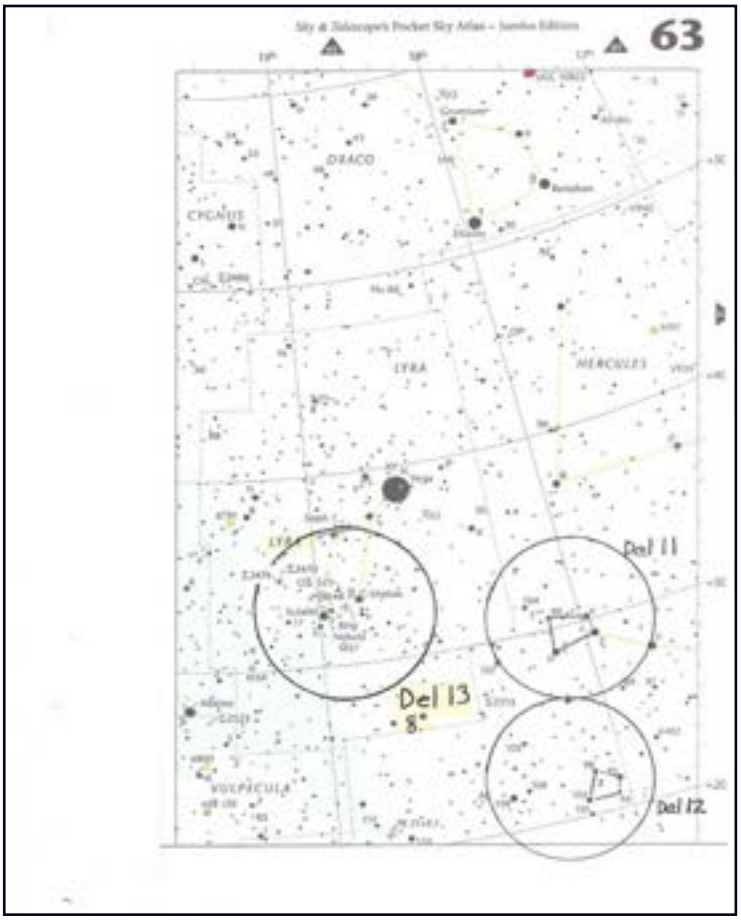
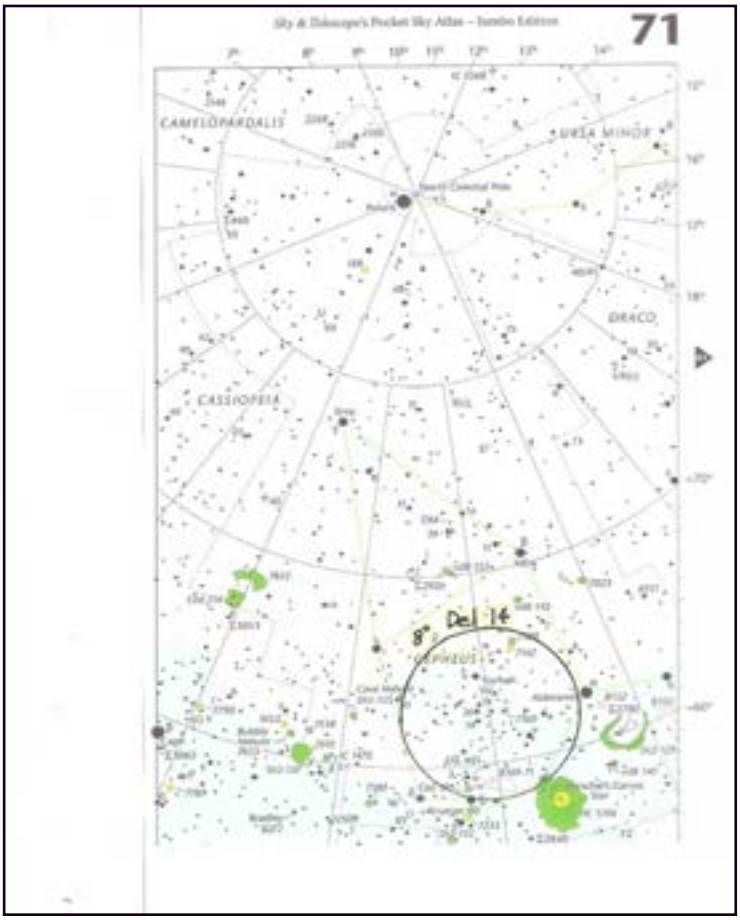
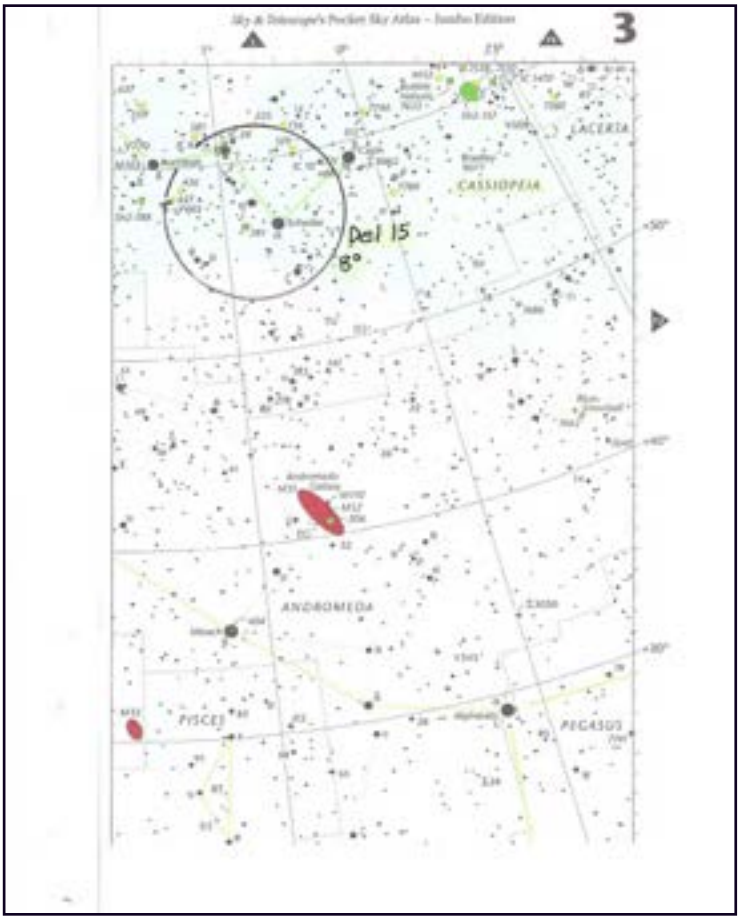




Del-14, Cepheus: RA 22h 00m DEC +63°. Though the constellation represents a King, its shape is often depicted as a child's drawing of a house – a box for the house and steeple for the roof, the tip of which is the star Gamma Cephei. The tip of the roof points roughly at Polaris. We are targeting the center of the "house" formed by the stars Alpha, Beta, Iota and Zeta Cephei, to home in on Del-14. More precisely, we want the center of our 8.3° field to be at the midway point from Beta to Zeta Cephei. One landmark I noticed near my field's center were three 5th magnitude stars (18, 19, 20 Cephei) in a short curve facing two 4th magnitude stars (Nu, 9 Cephei). Once you're settled into your new house here, I think you'll like what you see. Sky Atlas 2000 Chart 3, Bright Star Atlas 2000 Chart 2, S&T Pocket Sky Atlas Chart 71.



Del-15, Cassiopeia: RA 00h 50m DEC +58°. Cassiopeia is buried in a bright section of the Milky Way. Thus, I knew within its borders I'd find something worthy for my Del Catalog. It was a tough decision, but I settled on an 8 degree - wide circle around Alpha (Schedar) and Gamma (Chi or Navi) Cassiopeiae. To get the best view, place the two stars in the middle of your field, with Gamma slightly closer to the field's northern side. Doing so should bring

The Backyard Astronomer
by Bill Dellinges

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Zeta and Lambda just inside the southern edge of the field. Enjoy.

Note: I was very tempted to use Beta Cassiopeiae (Caph) and the starfield just north of it for Del-15. But as beauti ful as that dense starfield was, its myriad stars were faint, and the point of my catalog was to highlight wide fields of bright stars even city dwellers could appreciate. With that in mind, when you've gleaned enough of Del-15, slide your bino half a field east to Caph, then move the star slightly off center to the south and feast your eyes on something you won't soon forget. Perhaps not Del-worthy, but a nice treasure not to be missed. Even in my moderately light polluted sky, the sight was quite impressive. Sky Atlas 2000 Chart 1, Bright Star Atlas 2000 Chart 1,2, S&T Pocket Sky Atlas Chart 3.

Deep Sky Imaging Target Highlights for September
by James Yoder

The average low temperature for September in the Phoenix metro area is 77° F. September 16th is a new moon with Astronomical dusk at 7:55 pm and Astronomical dawn at 04:48 am, giving us 8 hours 58 minutes of imaging time.

In this month's list there are over 118 object/configuration combinations provided of just about every class of deep sky object including 9 Globulars, 12 Open Clusters, 25 Planetary Nebulas, 33 Nebula and 12 Dark Nebula, 27 Galaxies/ Galaxy Clusters. There is a wide variety of various objects accessible this time of year.

Bright Moon Targets – These are small targets that have a high surface brightness, these would be globular clusters and Planetary Nebula, that with appropriate 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 crosse the meridian (aka Transit) sometime between Astronomical Dusk to Dawn. We will be highlighting objects that transit roughly between 10pm and 2am. This ensures maximum imaging time over the month.

Happy Hunting!

Some Highlighted Targets for September

Configuration	Page	Object(s)	Type	Image Link
Hyperstar	27	Wolf's Cave (VdB-152)	DN, Nebula	200 min
Hyperstar	32	Lobster Claw, Bubble Nebula	Nebula	258 min
Focal Reducer	37	NGC-147, NGC-185 (Mosaic, 2 frames)	Galaxy Pair	505 min
Focal Reducer	40	NGC-246, NGC-255, PGC-2689	Galaxies, PN	190 min
Primary Focus	21	Pegasus Cluster (M-15)	Planetary Nebula	Unknown
Primary Focus	27	Helix Nebula (NGC-7293)	Planetary Nebula	90 min
Primary (Moon)	25	NGC-7139	Planetary Nebula	94 min

Resources:

- ArtCentrics.com – September 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 that you have taken.

EVAC Fall Classes

by James Yoder

The East Valley Astronomy Club (EVAC) is currently offering a couple of classes for the extremely reasonable price of $15 for EVAC members and $25 for non-members. More information on each class including course materials, schedule details and recordings from previous classes can be viewed online (see links below). The following classes are being offered:

- Beginners Guide to Small Telescopes – Class is limited to 15 students
- Planetary Imaging Primer – Class is limited to 5 students

Class size will be limited and will be closed once limit have been reached.

Contact James Yoder at jty.Astro@ArtCentrics.com to reserve your spot or if you have any questions on the class.

Beginners Guide to Small Telescopes

This course is composed of 5 weekly ZOOM meetings and 5 weekly Labs. ZOOM Classes are every Tuesday at 7pm starting October 17th. Weekly labs are Saturdays, 7pm starting October 21st.

This course is an introductory class targeted to persons who are considering purchasing a telescope, or who have a telescope and would like to learn how to use it. The class covers topics such as the different types of telescopes, telescope mounts, accessories and considerations for purchasing a telescope. It also covers basic concepts useful for amateur astronomers including what to expect from your telescope, appropriate objects for viewing, understanding the night sky, planning an observing session and techniques used for locating objects. Classes will be held via ZOOM on Tuesday evenings and will be recorded.

Labs are hands-on and involve utilization of a small telescope (Bring your own, or one will be supplied). The intent of the labs is to ensure students are comfortable with using a telescope and to teach basic techniques used to locate and view various objects. Labs will be scheduled for Saturday evenings.

Planetary Imaging Primer

This course is composed of 3 weekly ZOOM meetings and 3 weekly Labs. ZOOM Classes are every Tuesday at 7pm starting November 21st. Labs will be held weekly every Saturday Starting November 25.

This course is an introduction to photographing the sun, moon and planets. It discusses equipment available for photographing targets and some of the techniques used to image with your telescope and how to process the images/video captured. Special attention is focused on Lucky Imaging with demonstrations on utilizing the software to process and obtain a final image.

Labs are hands-on and involve using your telescope to image various targets. This is a bring-your-own telescope class, and the student is expected to understand the basics of using their telescope. While the student is encouraged to use their own camera if they have one, a camera is not required for the class and can either share one with other students or use one supplied by the club.

EVAC Outreach Events

by Claude Haynes

September Outreach Events:

- Friday, September 8 – 2nd Friday Riparian Star Party.
- Wednesday, September 23 - Astronomy Day. GRCO will be open for solar viewing.
- Also, we will have public viewing that night at the Apache Junction Library.

Details can be found on the EVAC website. Just go to www.evaconline.org/events-meetings. Click on the calendar entry for location and times. Contact Claude Haynes (interim Events Coordinator) if you can volunteer at an event. It is helpful to know who is coming so we can inform you of where the observing field is located and how to gain access.

Monthly Meetings will be held in person and also presented live online using Zoom. See the EVAC Web-site 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 normal in-person monthly meetings have resumed. Also, the meetings will continue to be available online via Zoom.

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 7:30 pm.

Visitors are always welcome!

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

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 consder is AZ-Observing@groups.io, simply click on this link https://groups.io/g/AZ-Observing and follow the instructions on the page. EVAC also has a Facebook Group where members may share ideas, photos, and Astronomy related information. To join: EVAC Facebook Group.

The Gilbert Rotary Centennial Observatory (GRCO) also has a Facebook Group where members may share ideas, photos, and Astronomy related information. To visit, please click on Gilbert Rotary Centennial Observatory - GRCO.

Gilbert Rotary Centennial 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 grco@evaconline.org for information.

EVAC Used Equipment Sales Highlights - September

The East Valley Astronomy Club (EVAC) has various used astronomy equipment for sale at excellent discounted rates. We also sell telescope packages that have just about everything you need to get started in astronomy. Our inventory is continually changing due to donations and sales (prices are set to move these guys out!). Check out our sale page at: https://tinyurl.com/EVAC-Sales for the latest items on sale.

This Months Highlighted Sale Items:

- Celestron NexStar 8 GPS - Price New: $2900, Sale Price: $1200.
- Celestron Astro Fi 90mm Refractor Telescope - Price New: $510, Sale Price: $200.
- Meade 4.5" Newtonian Package - Sale Price: $125.

Contact the EVAC Property Director (James Yoder) at properties@evaconline.org for more details and to answer any questions. Detailed information on products being offered can be found on the EVAC Sales webpage HERE. This page includes a brief description of the items, photos and references (i.e. users manuals, ect.)

EVAC Equipment Rental Program

The East Valley Astronomy Club (EVAC) Is introducing a rental program for EVAC Members. Details on terms and equipment can be found on the EVAC Rental page. Currently the following items are available for rent:

- **Celestron C-8 with Nexstar GoTo Mount** $25 first week, $20 each week after (up to 4 weeks).
- **Celestron 10" Dobsonian Telescope** $25 first week, $20 each week after (up to 4 weeks).

Telescopes come with all equipment needed for observation (ie eyepieces, finder scope, power supply, etc.)

Contact the EVAC Property Director (James Yoder) at properties@evaconline.org for more details and to answer any questions.

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 E

September 2023

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

September 8 - EVAC Riparian Star Party

September 15 - EVAC Monthly Meeting

September 23 - Astronomy Day. Solar viewing at GRCO and night time viewing at the Apache Junction Library.

October 2023

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				

October 13 - EVAC Riparian Star Party

October 14 - Annular Solar Eclipse

October 20- EVAC Monthly Meeting

East Valley Astronomy Club - 2023 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 (*Renew in January)*	**$15.00** ☐	**$20.00** ☐	**$10.00** ☐

Renewal Dues (Current Members Only**)** Astronomical League: $7.50 Annually: ☐

Individual	Family	Student (18yr+ with ID)
$30.00 ☐	$35.00 ☐	$20.00 ☐

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.

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@evaconline.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.

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

www.evaconline.org

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

Last Quarter Moon on September 6 at 15:21

New Moon on September 14 at 18:39

First Quarter Moon on September 22 at 12:31

Full Moon on September 29 at 02:57