

THE OBSERVER

VOLUME 37 ISSUE 8



Webb's First Deep Field

APOD July 15, 2023 - Image Credit: [Nasa](#), [ESA](#), [CSA](#), [STScI](#), [NIRCam](#)

From the Desk of the President by Claude Haynes

Sirius is rising with the Sun as we enter the "dog days of summer". Hopefully, the monsoon rains will arrive soon and bring relief to our parched desert landscape. I know that some of you have enjoyed the extended delay of monsoon season to catch some extra photons. Many great pictures have been posted to the EVAC Facebook page, and if you are not a member, I would encourage you to sign up for both EVAC and GRCO pages. Good information on events, opportunities for great deals on used equipment and of course those pretty pictures.

We had a strong turnout for our last summer series Library events

on July 24. Gordon Rosner gave an informative and interesting presentation to about 60 adults and children. We had fun observing the Moon until the clouds decided otherwise, but swiftly caught the Ring Nebula as a replacement.

Don Wrigley and I have been busy in the heat building cases for three new telescopes that EVAC has donated to the SE Regional Library. A photo on page 2 in this edition shows them set up in the work room of the library. Our relationship with the library began in 2016 when we purchased five 4.5" Dobsonian telescopes and three 10x30 binoculars. Library patrons can

UPCOMING EVENTS:

EVAC Public Star Party - August 10th
EVAC Meeting - August 17th

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From the Desk of the President

by Claude Haynes

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check them out for a week. The documentation for the binoculars includes a book on bird watching and one on using them for astronomy. The telescope cases provide eyepieces of 25mm and 10mm, with a Barlow for doubling the power. The three new telescopes are 6" Dobsonians, since the 4.5" has been discontinued, and provide the same eyepieces and manuals so the library staff requires very little training on the new telescopes. We also replaced the optical finder scopes that had suffered a little damage over the years and updated the older cases. These have been extremely popular over the years, and the addition of three telescopes will hopefully reduce the current waiting time to check them out.

Our August meeting will feature a presentation by member Steve Bradshaw entitled "How Far Away is That?" and it should be a lot of fun. We appreciate our membership sharing their experiences and if you have a short talk or larger presentation that you feel would be beneficial and informative please contact our VP Woody Simms so he can schedule it.

Stay cool, hydrated and keep looking up.

Your President
Claude Haynes



EVAC Telescopes at the Gilbert Library

EVAC Outreach Events

by Claude Haynes

August Outreach Events:

- Friday, August 11 – 2nd Friday Riparian Star Party.

Details can be found on the EVAC website. Just go to www.evaconline.org/events-meetings. Click on the calen-

dar 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.

The Backyard Astronomer

by Bill Dellings

New Catalog of Stellar Rich-Fields for Binoculars (4th Edition)

In this 4th Edition of attractive fields of bright stars as seen in an 8x42, 8.30 field binocular, I offer the following three stellar vistas in the August skies that have not been claimed by the professionals (see my "rules" in the 1st edition in the September 2022 EVAC Observer).

Del 10, Sagittarius: Centered on RA18h55m, DEC-22°. This selection surprised me because I assumed Sagittarius, being in the foreground of the center of our Galaxy, would offer splendid star fields for binocular perusing. But I was hard put to find anything that knocked my socks off. Several factors worked against me here. First, if you're at 7,000' and a hundred miles from a city, the view in a binocular will be amazing. But rarely are we there. Two, there's a lot of interstellar dust in that direction which dims the stars. Three, the constellation's low altitude results in atmospheric attenuation - more dimming of starlight. Nevertheless, I found something I thought Del-worthy. Five degrees north of the Teapot's Handle is an asterism known as the Teaspoon. Though only 3rd magnitude stars, they're more concentrated than the more spread-out 2nd magnitude stars of the Teapot. My 8x42, 8.3° field could not get the entire Spoon in (the Spoon's handle is bent up towards the NE) but the three stars forming a shallow V of the Spoon's cup, if moved slightly to the left in your field, delivers a wealth of fainter stars above and west of the Spoon. I was quite pleased with the view and happy to welcome them into the Del family. See the first picture on page 4..

References: Sky Atlas 2000 Chart 22, Bright Star Atlas Chart 7, S&T Pocket Sky Atlas Chart 67.

Del 11, Hercules: RA18h00m, DEC+29°. At first glance, there's nothing between Hercules and Lyra. But many years ago, while cruising between these two constellations, I was startled to find a sea of 3rd and 4th magnitudes stars residing there, hidden in plain sight. Stargazing columnists seem to have ignored it. Until now! (Actually, I did discuss this area before in *The Backyard Astronomer*, A Binocular Romp Through Hercules' Eastern Star Fields in the July 2021 EVAC archive). If you're game for a challenge, you're in for a treat. First find 3rd magni-

tude Delta Herculis (Just above the top of Ophiuchus). Follow the three stars in a straight line from Delta going NE. Note the third star, Xi, makes a trapezium with Nu, Omicron and 99 Herculis. Due to its resemblance to the "Keystone" asterism denoting the Strongman's torso, I call this Mini-Keystone A. Are you with me so far? Place this Mini-Keystone slightly right (west) of center in your binocular field and you are looking at Del 11. About 20 other stars around the Mini-Keystone create a stunning sight. Note: Though the area looks like a void to the naked eye, once my eyes get dark adapted, I can just barely pick out a hint of stars there without optical aid. See the second picture on page 4..

References: Sky Atlas 2000 Chart 8, Bright Star Atlas Chart 7, S&T Pocket Atlas Chart 52, 54, 65.

Del 12, Hercules: RA18h05m, DEC+21°. You won't have far to go to get from Del 11 to Del 12. Simply move your binocular 80 due south in declination - for my binocular, that's just one field's worth of travel! You know you're there when you see ANOTHER trapezium. This one's slightly dimmer and smaller than its northern counterpart. Three of its stars are 95, 96, and 102 Herculis. I call this one Mini-Keystone B. Both trapeziums have their shortest side pointed west compared to the main Keystone in Hercules' body, in which its shortest side faces south. To get the most rewarding view of this starfield, place the little trapezium slightly to the lower right of your field, which moves a nice flock of 20 fainter stars into the scene. Midway between these two trapeziums, one star, 5th magnitude 100 Herculis, sticks out above the others because of its brightness. It's a fine double star (Mag 5.8, 5.8, 14", PA 183°). I stumbled across it by accident cruising between the two trapeziums with my APM 28x100 and was blown away by its two "headlights coming at you" appearance (an 8x42 won't split it). I recently put my TV 85mm on it and barely split it at 19x, 50x was more pleasing.

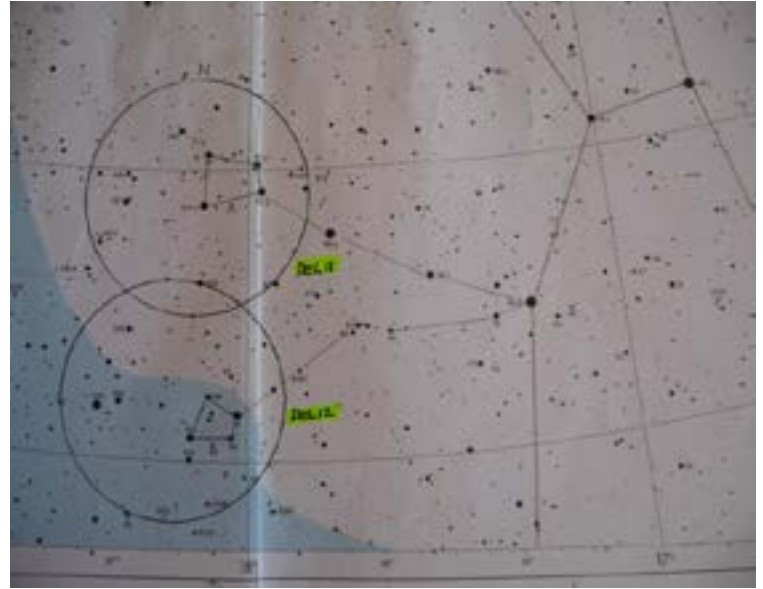
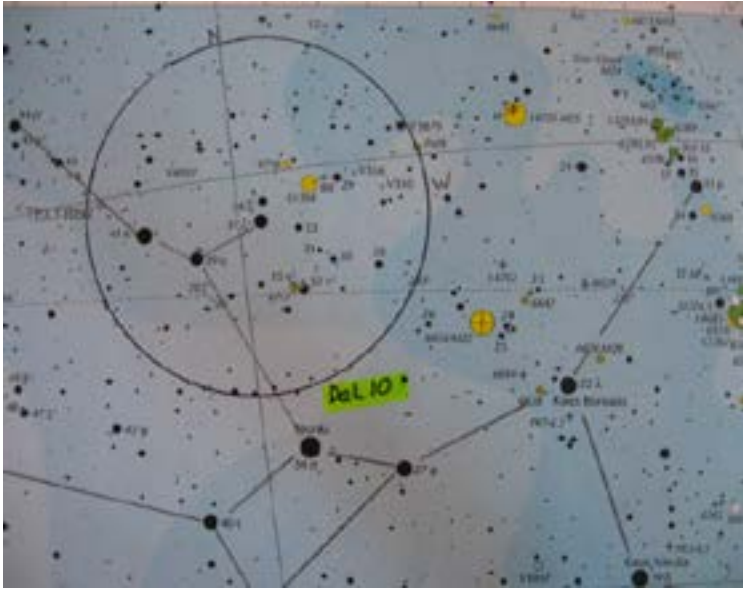
I would encourage stargazers to throw a binocular on this interesting splash of stars in eastern Hercules. I think you'll be surprised at the action here, hiding in plain sight.

References: Sky Atlas 2000 Chart 8, Bright Star Atlas Chart 7, S&T Pocket Atlas Chart 65.

The Backyard Astronomer

by Bill Dellinges

Continued from page 3



EVAC ZOOM Meeting Minutes for July 21st, 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

- Visitors Recognition
- GRCO – – Open for public viewing Friday & Saturday Sunset – 9:30pm (weather permitting).
- Explore the Night Sky: Presentation held on Monday 7/24 at the library.

Member Presentation: Filters Part 2

Presenter: James Yoder

Part 2 of a two part series on filters for observation of deep sky objects. In this presentation, we discuss the nature of light from different types of deep sky objects, what filters are supposed to do, review what filters should be used under what conditions, and review some specific filters. Download the full 20 page paper at <https://tynnyurl.com/VisualFilters-2023> if you would like the full details.

Main Presentation: Dynamic Eclipse Broadcast Initiative

Presenter: Matt Penn (mattpenn2015@gmail.com)

There is a core group of about 20 folks working on this project along with many volunteers. Matt discussed what kind of science can be done from the ground in studying eclipses, what was done in 2017, what improvements they want to make for 2024 and what opportunities there are for new volunteers to participate. Matt also talked about how making observations during a solar eclipse provide insight into the mechanics of how particles are accelerated once they leave the surface of the sun. The 2017 eclipse gathered some initial data of the acceleration profile and they want to gather more data on this in the 2024 eclipse. Visit <http://debinitiative.org/> for more detail.

Next Monthly Meeting

August 18th 7:45 pm

What's Up - Some Astronomical Events of Note for August 2023

by James Yoder

Here we make note of some interesting astronomical occurrences for the month that are visible from the Phoenix Metro area. Events we are on the lookout for include:

- [Transits](#) – When a celestial body passes directly between a larger body and the observer. For example when one of the inner planets such as Venus passes in front of the Sun ([image](#)).
- [Eclipses](#) – Specifically we are focused on [Lunar Eclipses](#) (where the Earth passes between the Sun and the Moon) and [Solar Eclipses](#) (where the Moon passes between the Sun and the Earth).
- [Comets](#) – For the comets we are focused on bright comets ([image1](#), [image2](#)) or ones that may have a near miss with other astronomical objects such as globular clusters, planets, nebula, etc ([image](#)).
- Planet Activity – [Oppositions](#), [Conjunctions](#) ([image1](#)) and [Occultations](#) ([image2](#)) of note that may be an opportunity for observation or photography. For Jupiter, we also note when multiple moon shadow transits are visible.
- Visually Interesting astronomical alignments such as Moon & planets arrangement in the morning or evening sky ([image1](#)).

Equipment Requirements are noted as follows:

- NE – **N**aked **E**ye event, no equipment needed to appreciate this.
- BL – A decent pair of **B**inoculars are recommended.
- CT – **C**amera on a **T**ripod can be used to capture this event.
- TS – **T**elescope is required to view this event.

Date	Event	Time	Equipment	Images	Ref	Comments
08/01	Full Moon		NE			
08/13	Perseids (90)		NE, CT		1	Max @ 1am, ZHR=90
08/16	New Moon		NE			
08/27	Saturn at Opposition	07pm-6am	TS			Good time to image Saturn
08/31	Full Moon (Blue Moon)		NE			

These events and others throughout the year can be viewed on my webpage [here](#), Happy hunting!

FULL MOON ON AUGUST 1 AT 11:31

LAST QUARTER MOON ON AUGUST 8 AT 03:28

NEW MOON ON AUGUST 16 AT 02:38

FIRST QUARTER MOON ON AUGUST 24 AT 02:57

Deep Sky Imaging Target Highlights for August

by James Yoder

The average low [temperature](#) for August in the Phoenix metro area is 83° F, same as July. August 16th is a new moon with Astronomical dusk at 8:42 pm and Astronomical dawn at 04:20 am, giving us 7:38 hours of imaging time.

In this month's list there are over 130 object/configuration combinations provided of just about every class of deep sky object including 16 Globulars, 17 Open Clusters, 32 Planetary Nebulas, 35 Nebula and 12 Dark Nebula, 18 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 cross 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 June

Configuration	Page	Object(s)	Type	ImageLink
Hyperstar	27	Pelican & North American Nebula	Nebula	888 min
Focal Reducer	29	Witch's Broom (NGC-6960)	Nebula	880 min
Primary Focus	21	Dumbbell Nebula	Planetary Nebula	91 min
Primary Focus	41	NGC-7331 Group	Group of Galaxies	Unknown
Primary (Moon)	31	Fetus Nebula (NGC-7008)	Planetary Nebula	144 min
Primary (Moon)	37	NGC-7139	Planetary Nebula	94 min

Resources:

- [ArtCentrics.com](#) – [August 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, orientation of the image you have taken.

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 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 consider 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@evaonline.org for information.

Used Equipment For Sale at Great Prices

The East Valley Astronomy Club (EVAC) has just posted used astronomy equipment for sale.

- Sales are “As Is”
- Pick-Up-Only

Contact the EVAC Property Director (James Yoder) at properties@evaonline.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.)

Equipment being offered for sale this month includes:

- **Celestron NexStar 8 GPS**
- **Celestron Astro Fi 90mm Refractor Telescope**
- **Homemade 15” Truss Dob**

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 Rent 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@evaonline.org for more details and to answer any questions.



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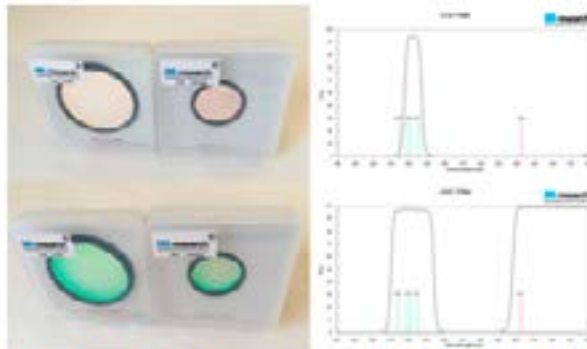
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www.apache-sitgreaves.org

AUGUST 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		

August 11 - EVAC Riparian Star Party

August 18 - EVAC Monthly Meeting

SEPTEMBER 2023

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	7	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

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 (<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: \$7.50 Annually: <input type="checkbox"/>
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: <input style="width: 95%;" type="text"/>	Phone:	<input style="width: 95%;" type="text"/>
Address: <input style="width: 95%;" type="text"/>	Email:	<input style="width: 95%;" type="text"/>
City State Zip	URL For website	<input style="width: 95%;" type="text"/>

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.

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www.evaonline.org

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