

THE OBSERVER



Webb's Southern Ring Nebula (APOD 07/14/2022)
Image Credit: NASA, EESA, CSA, STScI, NIRCAM

UPCOMING EVENTS:

The August 19th EVAC Meeting will be held both online via Zoom and in person at the Gilbert Library. The speaker will be Don Wrigley. The topic will be Lunar Observing.

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From the Desk of the President by Claude Haynes

With Sirius appearing at sunrise, we have come to the “dog days of summer”. I am just dog tired of all the clouds, but we need whatever rain we can get. While this summer hasn’t been great for observing, it has been fun for other activities. In partnership with the SE Regional Library, we held our second family night event. We had a good turnout and Alex Nachman delivered a presentation on the James Webb Space Telescope, and even though a storm was brewing we were able to observe. We are resuming our 2nd Friday evening events on August 12 with a presentation in the library meeting room at 7pm and

observing through additional telescopes at the NE entrance to the Riparian Preserve. Don Wrigley is coordinating the telescope viewing. If you, or you know of someone, with a telescope they are not familiar with or are having some trouble using, send an email to grco@evaconline.org and you can meet Don that evening to check it out. In the past these sessions have helped a lot of people and added to our membership.

Later in the newsletter you will see a notice of modification to our dues structure. We are not changing rates but are simplifying the tiers.

From the Desk of the President

by Claude Haynes

Continued from page 1

We are also adding an educational membership for students and teachers, 18 years and over with ID, at a reduced rate. The major purpose of the change is to reduce the odd cents in the current structure, but it also provides an opportunity for this new member level. The bylaws require us to publish the change and for it to be approved by a majority of the members present at the next meeting.

Our meeting speaker will be Don Wrigley who will be presenting on Lunar Observing. Don is an experienced observer and loves looking at the many features on the

Moon as they reveal themselves through the first half of the lunar cycle. It should be a great motivating experience to observe the Moon more closely. Thanks to Sid for his two-part presentation on astrophotography. Don't forget to check the website to view past recorded ZOOM meetings

Enjoy the dog days, and when we see Sirius in the night sky it will be a lot cooler.

Your President
Claude Haynes

EVAC Zoom Meeting Notes for 2022 July 15th, at 07:30 P.M. AZ Time

by Club Secretary Gordon Rosner

Greetings from your club Secretary.

We continue normal club operations with our third in-person monthly meeting and Zoom simulcast. For this meeting we had 41 physically in attendance.

First, and again, the standard monthly stuff for you first time readers. For those who are regular readers, you can skip this paragraph. The following are my notes from our 15 July General Membership Meeting. All our monthly meetings are recorded and are available to watch via links in our club's website. If you missed this meeting, or want to watch again, you can watch the recording online. My notes published here are only a summary and certainly do not replace watching the actual video presentation. Hopefully, I will provide just enough to spark a drive for our members and potential members to watch the recording.

On with this meeting's notes.

The meeting started at 7:30PM with a 15 minute social gathering for in-person attendees. Water, ice and some light snacks were provided. At 7:45PM, club President Claude Haynes welcomed those in attendance and our Zoom viewers. He then recognized our new visitors in the audience, introduced the club officers and gave a summary of the library's Summer Family Events. The club is supporting these events with presentations on the James Webb Space Telescope that will be held in the same room we hold our monthly meetings.

Claude presented a draft revision to club membership dues that includes reduced student and teacher dues that the club's Board of Directors proposed. Per the club's Policies and Procedures, the formal proposal will be presented at the next General Meeting for discussion. Revisions to membership dues require a vote during a General Membership meeting by club members present.

Claude then showed pictures of the Grand Canyon Star Party that the club supported along with other astronomy clubs. He estimated about 50 telescopes were there for the public to enjoy the fabulous views the dark sky provided. He added his side trip highlights to Lowell. He further discussed the desire to have a meteorite display created to be used during club events and on display at our GRCO observatory.

During the meeting members took advantage of renewing their club memberships in-person with our Treasurer, Alexandra Nachman, and some bought club shirts and hats that were available. We also had a few new members sign up.

Claude then introduced EVAC club member Sid Frede for our main presentation titled 'Astrophotography is a Journey, Not a Sprint - Part 2'. This was the continuation of last month's presentation by Sid. Sid's presentation is of such detail regarding beginning astrophotography that the presentation had to be split up into two parts. If you are interested in beginning astrophotography, this two-part presentation is definitely for you. Sid started the presen-

EVAC Zoom Meeting Notes for 2022 July 15th, at 07:30 P.M. AZ Time

by Gordon Rosner

Continued from page 2

tation with a short review of last month's Part 1, then dived right into Part 2 that focused on image calibration. He showed a diagram of his electrical connections of his imaging equipment and how important it is to organize all the growing number of wires that will be accumulated. Sid talked about exposures, finding a target, and described Declination and Right Ascension. He presented RA and Dec in easy to understand detail and gave demonstrations of how they are used throughout the year. Great job, Sid. This is a must see part of his presentation for everyone.

Sid continued with lists of planetarium programs, framing, how to pick a target, and very detailed descriptions of guiding techniques. He went into describing Light Frames and the "Good, the Bad, and the Ugly" of calibration frames. He then showed images of his progression through his learning journey. He then showed various pictures of how real science images can be manipulated into art and how the astrophotographer can add their artistic flair to the original image. Just as we thought the

presentation was over, Sid added another treat of his recommendations of equipment and the prices, software available (some free), and a list of online "mentors" to learn from. He then used a background of more images as he answered questions from the audience.

I cannot emphasize more that anyone who is seriously interested in beginning their journey in astrophotography, or even those that have already been drawn into it, should watch Sid's two presentations. It not only helps in understanding all the aspects, but certainly helps you in avoiding some mistakes and frustrations. Again, great job Sid!

Claude thanked Sid and those in attendance and those on Zoom and reminded everyone that the next meeting will again be in-person and simulcast on Zoom on 19 August opening at 7:30PM. The meeting will again be at the library. Claude closed the meeting at 9:25PM.

Gordon Rosner

EVAC Membership Update

The board is proposing updating the tiers for memberships purchased during the years. The goal is to simplify the tiers and eliminate less than full dollar increments. This will be voted on at next meeting.

Individual Membership Currently

\$30.00 Jan – Mar
\$22.50 Apr – June
\$15.00 Jul – Sep
\$37.50 Oct – Dec (includes next year)

Proposed Change

\$30.00 Jan – Jun
\$15.00 Jul – Dec (renew in Jan)

Education Membership

\$20.00 Jan – Jun
\$10.00 Jul – Dec (renew in Jan)
18 yr+ with ID

Family Membership

\$35.00 Jan – Mar
\$26.25 Apr – Jun
\$17.50 Jul – Sep
\$43.75 Oct – Dec (includes next year)

\$35.00 Jan – Jun
\$20.00 Jul – Dec (renew in Jan)

The Backyard Astronomer

by Bill Dellinges

Wonders of the August Skies (August 2016)

Midmonth finds the Milky Way ranging from the northeast to the southwest providing perhaps the best view we get of our home galaxy all year. This is possible because our Solar System is located halfway, about 26,000 light years (LY), from the galaxy's center and outer edge. In a dark sky, this affords us a wonderful view of its myriad stars and meandering dark lanes of gas and dust. It's amazing that we can observe much of the structure of our own galaxy when we reside inside it! (Our Galaxy's spiral arms can be partially made out with radio telescopes).

The Milky Way "band" represents the main plane of our galaxy. Any constellations superimposed on it will contain the richest harvest of deep sky objects. One could spend an entire summer evening gorging on this booty. Let's take a look at some of its enticing treasures.

Looking down at you from high on the meridian is the Summer Triangle, a popular asterism comprised of Altair, Vega and Deneb. Their distances in light years (LY) are 16 LY, 25 LY and 2,600 LY respectively. Altair was the star visited by spacemen in the 1950's sci-fi movie Forbidden Planet. Vega was the star Jodie Foster was transported to in the movie Contact (or was she?). Though Deneb looks like the faintest star in the Summer Triangle, it's really intrinsically the brightest star of the three. We stargazers normally deal with the apparent magnitudes of stars. There is another neat magnitude system called absolute magnitude, which is what a star's magnitude would be if placed 10 parsecs away (32.6 LY). This allows us to judge how bright stars really are because now we have them lined up at the same distance. So, we had Altair, Vega and Deneb with apparent magnitudes of +0.75, +0.03 and +1.26 respectively. Now put all three 32.6 LY away. How bright are they now? (keep in mind the bigger the num-

ber, the dimmer the star). Altair is now magnitude +2.1 because we increased its distance, Vega is now +0.3 for the same reason. But because we moved Deneb towards us from 2,600 LY to 32.6 LY, its magnitude is now -7.1! We say these are the star's absolute magnitude. We see our Sun as a -27 magnitude star but placed at 32.6 LY, its absolute magnitude would be +4.8, barely visible to the naked eye. Deneb is a white supergiant star, a real blow torch 60,000 times the luminosity of the Sun. It puts out more energy in one second than the Sun does in a day.

You can take your pick among a plethora of fine planetary nebulae in the summer skies: M27 (Vulpecula), M57 (Lyra), NGC 6543 (Draco) and NGC 7662 (Andromeda). M27 is the brightest planetary and rewarding in just about any sized telescope. It looks like a big cotton ball suspended in space.

Sagittarius contains more Messier objects (15) than any other constellation. One could easily spend several hours observing deep sky objects within its confines. The reason for this richness is that when we look in the direction of Sagittarius, we are looking towards the Galaxy's center where stars and nebulae are more numerous. Be sure not to miss M8, the Lagoon Nebula, M17, the Swan Nebula, M22, an impressive globular star cluster and the M24 Star Cloud. The latter stands out to the naked eye as a bright oblong detached piece of Milky Way between M8 and M17. It's a spectacular scene to behold in a 10x70 or 16x70 binocular, way too large for most telescope fields. (60'x90').

If you find a break in this summer's monsoon season, take a look at some of these objects, you're sure to get happy feet.

EVAC Outreach Events

by Alexandra Nachman

We are working on planning some fun events while the monsoon is in full swing. Our last event in June at the Southeast Regional Library was a success with 60 attendees and lots of cool information presented on the Webb Telescope! While we wait for the temperatures to cool off

and the clouds to go away, we are working on planning some fun new events with some awesome organizations!

Alexandra Nachman
Events Coordinator

Deep Sky Imaging Target Highlights for August

by James Yoder

The average low [temperatures](#) for August in the Phoenix metro area is 83° F(Same as July). August 27th is a new moon with Astronomical dusk at 8:25pm and Astronomical dawn at 4:31, giving us 8:06 hours of imaging time.

In this months list there are over 103 object/configuration combinations provided of just about every class of deep sky object including 16 Globulars, 14 Open Clusters, 11 Planetary Nebulas, 29 Nebula and 10 Dark Nebula, 23 Galaxies/ Galaxy Clusters.

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 August

Configuration	Page	Object	Type	ImageLink
Hyperstar	16	Pelican & N American Nebula (IC-5070)	Nebula & Open Cluster	175 min
Hyperstar	23	Elephant Trunk (IC-1396)	Bright Nebula	120 min
Focal Reducer	18	Pickering's Triangular Wisp (NGC-6960)	Nebula	No Image
Focal Reducer	28	Stephan's Quintet & NGC 7331 group	Galaxies	No Image
Primary Focus	28	Helix Nebula	Planetary Nebula	75 min
Primary Focus	23	Dumbell Nebula (M-27)	Planetary Nebula	91 min
Primary Focus	31	NGC-7479	Barred Spiral Galaxy	230 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.

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.



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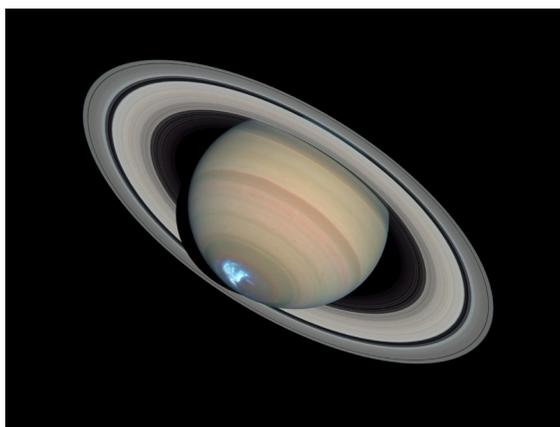
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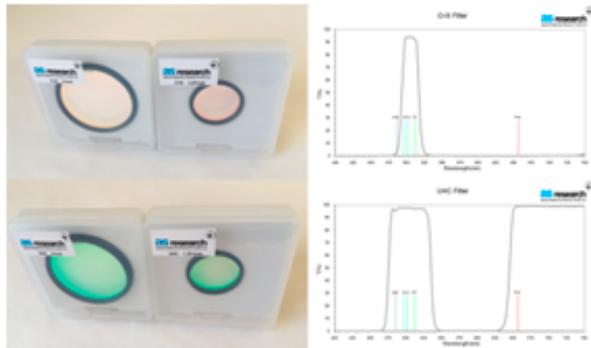
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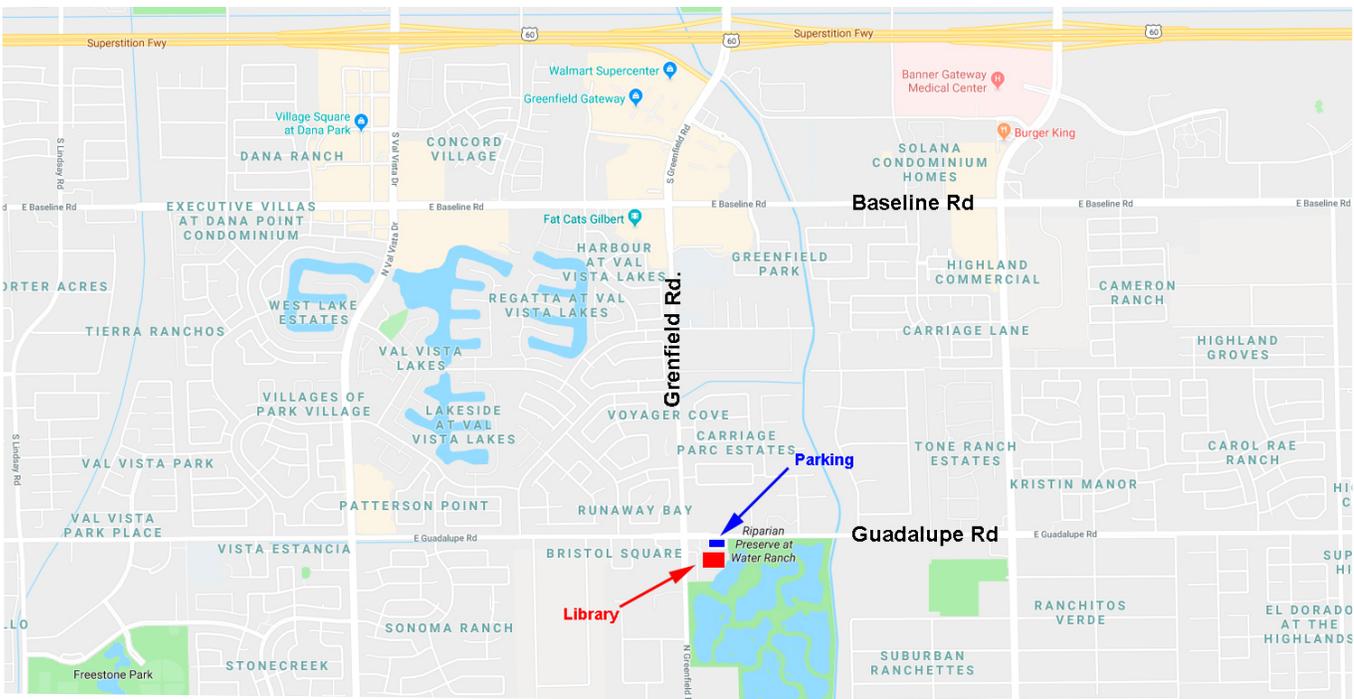
Monthly Meetings will be held in person and also presented live online using Zoom. See the EVAC Website for updates. All other events are on hold until health concerns are resolved.

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



AUGUST 2022

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 12 - EVAC Public Star Party

August 19 - EVAC Monthly Meeting Online via Zoom and in Person at the Gilbert Library.

SEPTEMBER 2022

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 9 - EVAC Public Star Party

September 16 - EVAC Monthly Meeting Online via Zoom and in Person at the Gilbert Library.

East Valley Astronomy Club – 2022 Membership Form.

IMPORTANT: All memberships expire on December 31 of each year

New Member Dues (select according to the month you are joining the club)

	Individual	Family	
January, February & March	\$30.00	\$35.00	
April, May & June	\$22.50	\$26.25	
July, August & September	\$15.00	\$17.50	
October, November & December	\$37.50	\$43.75	<i>(Includes following year)</i>

Renewal (current members only):

\$30.00 Individual **\$35.00 Family**

Astronomical League: \$7.50 Annually (per person)

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 _____

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FIRST QUARTER MOON ON AUGUST 5 AT 04:06

FULL MOON ON AUGUST 11 AT 18:35

LAST QUARTER MOON ON AUGUST 18 AT 21:36

NEW MOON ON AUGUST 27 AT 01:17