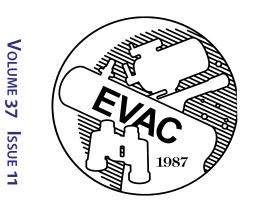
NOVEMBER 2023



THE OBSERVER



NGC 6744: Extragalactic Close Up APOD November 25, 2022: - NASA, ESA, LEGUS Team

From the Desk of the President by Claude Haynes

The year is winding down, but there is still much to do. Our most pressing need is your commitment to the future of EVAC. The November meeting is where we elect officers and board members for the coming year. Our Constitution and By-Laws set term limits upon these positions to encourage regular rotation of leadership and experience. As President my two years of eligibility are coming to an end. The same is true for two board members whose terms expire, and for our open position of Events Coordinator. As of the time I am writing this I have received one notification of a candidate for board member. We need your help to fill

the open positions and keep EVAC strong and well managed. If you are interested in serving as President, Board Member or Events Coordinator PLEASE send me an email to <u>president@evaconline.org</u>. Just like Uncle Sam – We Need You!

Our October meeting was fun. I appreciate all the Annular Eclipse submissions I received from members. We have many enthusiastic and talented observers. Solar Eclipses are truly spectacular events and the turnout at the observatory was a wonderful opportunity to experience a celestial event, as well as a shared communal experience. What did our primitive ancestors

UPCOMING EVENTS:

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

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From the Desk of the President by Claude Haynes

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do during this event eons ago? Did they cower in fear as the Sun is devoured by the Moon, or cheer wildly as the Sun was victorious in its battle and again shone brightly? We have a chance to gather as a community during the All Arizona Star Party on the weekend of November 10 and 11. We normally hold the event in October, but the eclipse and hot weather made us move it out to the next New Moon. There is more information later in this edition and on the EVAC website under Meetings & Events. The location is the North Hovatter Rd site and a map can be found on the website. Join us for a fun weekend of observing.

Our November speaker is David ladevaia who will be discussing observing the Milky Way with a DIY radio tele-

scope. This sounds like an amazing project. In December the park becomes a wonderland of lights and music during Riparian After Dark (Dec 8-19), but that does affect our regular schedule. Our annual holiday event will be Thursday, December 21 at 7:00pm in the library meeting room. EVAC will provide dinner, drinks and dessert. Feel free to bring holiday treats to share.

Let me know if you would like to volunteer as an officer or to assist with the holiday party planning.

Keep looking up!

Your President Claude Haynes

EVAC ZOOM Meeting Minutes for October 20th, 2023 at 07:30 P.M. AZ Time by James Yoder

Meeting Minutes

YouTube: EVAC monthly meetings can be viewed on You-Tube. Just search for the East Valley Astronomy Club on the YouTube website to locate the recordings or select this <u>link</u> for the 2023 meeting recordings.

<u>Welcome</u>

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

Attendence: 40 in person, 27 online.

Visitors Recognition: 5 new visitors.

Elections in November: We will have the following positions open for November elections:

- President
- Two Board Members
- Events Coordinator

EVAC Email List – Please note you are NOT automatically added to our announcement list when you join EVAC. If you would like to receive updates and information from EVAC please subscribe to the <u>announcements list</u> on our website.

EVAC Sales - We have a wide selection of used equipment at steeply discounted prices. Check out our <u>webpage</u> for the latest selections.

EVAC Rentals - We continue to expand our <u>rental pro-</u> <u>gram</u>. In addition to what we currently have (see page 7), we have added:

- Celestron C-8 with Nexstar GoTo Mount (\$25/week)
- Celestron 10" Dobsonian (\$25/week)
- 1.25" Visual Filters Kit 12 Visual Filters (\$5/night, \$15/ week)
- Planetary Imaging kit (\$5/night, \$20/week). This is our newest addition that has everything you need except for the telescope. The kit has a camera, computer, software and more.

Gilbert Riparian Centennial Observatory (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.

EVAC ZOOM Meeting Minutes for October 20th, 2023 at 07:30 P.M. AZ Time

by James Yoder

Continued from page 2

Upcoming Events:

11/10, 11/11 – All Arizona Star Party will be held. Details here.

12/21 – (Thursday) Holiday Party at 7pm. Food and drinks will be provided.

Member Presentation:

Free Astronomy Phone Apps (Part 1)

Presenter: Nathan Eskey

Nathan reviewed three phone apps that are useful for astronomy:

- <u>Stellarium</u>
- <u>SkyPortal</u>
- <u>Star Walk 2</u>

Main Presentation:

The following EVAC members presented photos and experiences from the October Eclipse:

- Claude Haynes
- Kevin O'Donnell

The Backyard Astronomer by Bill Dellinges

Winter's Sky Sneaking Up on Us

Last month we featured the fall sky, full of dim constellations and dim deep sky objects. While we await the glorious winter skies and its copious splendors, we can get a sneak preview of its vanguard by looking towards the north and northeast quadrant of the sky where we find Cepheus, Cassiopeia and Perseus. Let's begin with Cepheus, the King, directly above the North Star Polaris. The constellation itself is not conspicuous, only comprised of 3rd and 4th magnitude stars. I still have difficulty finding it. I try to remember it's adjacent and west of Cassiopeia, appropriate because in mythology they were the king and queen of Ethiopia. I find it helpful to see it as a child's drawing of a house, a "box" with a steeply pitched roof. At this time of year, it's upside down with the roof pointed down just to the right of Polaris. Points of interest: there is a spur of Milky Way stars invading the "box", enriching it with stellar gems. I called this region Del-14 in my September 2023 Backyard Astronomer – throw a binocular on it, it's quite a nice sight. As you face Cepheus, look to the upper right corner of the "box" and you'll note that corner is anchored by a triangle of stars, Zeta, Epsilon and Delta. The latter star is

- Frank Kraljic
- Ayush Saurabh
- Jeff Foreman
- Jim Sellers,
- Kristen Martinez
- Rick Scott
- Steve Aggas
- Bruce LaFrance
- James Yoder
- Nathan Eskey
- Tom Jacobs
- Tom Polakis
- Bob Buchheim
- Josh Eyre

Next Monthly Meeting

- November 17th 7:45 pm
- David ladevaia Research with a DYI Radio Telescope.

the prototype Cepheid variable star, and a fine double star (Mag 3.6, 6.3, Sep 40.8", PA 1910) (SAO 34508) easily split in a small telescope. Another multiple star of interest in Cepheus is the triple star Struve 2816 (SAO 33626) located just outside the top of the "box" (as you're facing it now, but south in an atlas). This triple is much easier to split than the tough triple lota Cassiopeia and offers, at no addition cost to you, another double in the same field, Struve 2819.

<u>Cassiopeia</u>, the Queen is a very distinctive constellation. The "W" shape of its main stars likely makes it one of the first constellations beginners learn. The Queen basks completely in the Milky Way's stars and thus is loaded with deep sky objects. If you like star clusters, you're in the right place. Try M52, M103, NGC 457 (the E.T. Cluster), and the often-overlooked NGC 7789. Some clusters are described as "Diamonds on black velvet." I see NGC 7789 as "sand on black velvet," unique in that its stars are dim and granular-like. One or two degrees east of M103 are four smaller open star clusters (NGC 654, 659, 663, Tr-1). I like NGC 663 better that M103! What do you think? Triple star lota Cassiopeiae is worth a look, though it's tough to split its 3 tight components cleanly. Triple stars

The Backyard Astronomer by Bill Dellinges

Continued from page 2

Struve 816 (see Cepheus above) and winter's Beta Monocerotis (SAO 133316) are much more amenable to the aging astronomer hunting for triple stars.

Perseus, the Hero, looks more like a wishbone to me, rather than a guy prancing around the night sky with a severed head in one hand. In the interest of brevity, lets skip the mythology and get down to the nitty gritty. Like Cepheus and Cassiopeia, Perseus luxuriates in the Milky Way, thereby possessing many celestial ornaments. Two are of the Crown Jewels caliber: the Double Cluster (NGC 869/884) and the Perseus O-B Association (Mel 20). The former are two young star clusters 7500 light years away and can be seen naked eye. In a telescope, it's just plain gorgeous. I'd put it in the top ten best sights in a telescope. But use low power, it's 35' long and you'll want a little more space for "framing" purposes. The best view in my opinion is through a 16x70 or 28x100 binocular. The Perseus O-B Association is a huge open star cluster surrounding Perseus' brightest star Mirphak. It can be seen naked eye as a glow of light just below Mirphak. The Cluster is 600 light years

away, 5th closest to us after the Hyades, Coma Berenices Cluster, Pleiades and M44 star clusters. This beauty is large, and to see it fully requires a binocular with a field of view of at least 7 or 8 degrees. I always marvel at the serpentine stream of stars running through it. M34, a large, bright star cluster, would be the first target of choice in Perseus if it were not for the two showstoppers above. Find it midway between Gamma Andromedae and our last stop: Algol, the "Demon star" (Beta Persei). It's an eclipsing variable star. Every 2.87 days, its orbiting companion swings between us and Algol cutting down Algol's light, reducing its magnitude from 2.1 to 3.4. These magnitude numbers are referred to as Algol's maximum and minimum brightness. They are published in Sky and Telescope magazine monthly, so you can go outside and witness the change in Algol's magnitude. For comparison of its minimum, note Alpha Trianguli in adjacent Triangulum is magnitude 3.4. It won't be long before the magnificent Winter Hexagon makes its annual appearance, and cooler temperatures prevail. I can't wait!

All Arizona Star Party Friday and Saturday - November 10 & 11, 2023

North Hovatter Rd site:

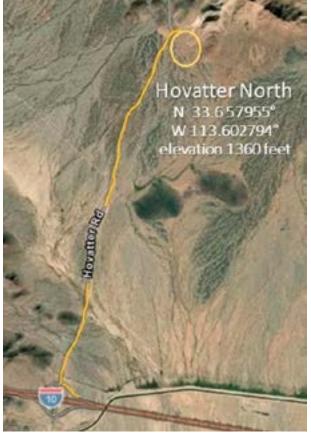
- From Phoenix, go west on I-10 to exit 53 (Hovatter Rd).
- Turn RIGHT onto North Hovatter Rd.
- Follow the gravel road (watch for the bump where the pavement ends).
- Take the RIGHT fork (not Hope-Hovatter Rd).
- Approximately 3.5 miles you will see a mining operation on the hillside.
- Take a hard right onto the observing field.

Friday, November 10:

- 5:00pm the hospitality tent for a potluck.
- 5:28 = Sunset.
- 10:00 Coffee and snacks.

Saturday, November 11:

- 4:30pm Temperance Union5 Happy Hour.
- 4:45 Raffle (tickets \$1 or 6 for \$5).
- 5:00 Chili Dinner (tickets \$5).
- 5:27 = Sunset.
- 10:00 Coffee and Snacks.



What's Up - Some Astronomical Events of Note for November 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:

- <u>Transits</u> 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 (<u>image</u>).
- <u>Eclipses</u> Specifically we are focused on <u>Lunar Eclipses</u> (where the Earth passes between the Sun and the Moon) and <u>Solar Eclipses</u> (where the Moon passes between the Sun and the Earth).
- <u>Comets</u> For the comets we are focused on bright comets (<u>image1</u>, <u>image2</u>) or ones that may have a near miss with other astronomical objects such as globular clusters, planets, nebula, etc (<u>image</u>).
- Planet Activity <u>Oppositions</u>, <u>Conjunctions</u> (<u>image1</u>) and <u>Occultations</u> (<u>image2</u>) 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(<u>image1</u>).

Equipment Requirements are noted as follows:

- NE Naked Eye event, no equipment needed to appreciate this.
- BL A decent pair of **Bi**noculars 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
11/03	Jupiter at Opposition	All Night	NE, BI, TS			This is a great time to view/image Jupiter.
11/05	Daylight Savings Time Begins					
11/13	New Moon	NE				
11/27	Full Moon	NE				

These events and others throughout the year can be viewed on my webpage here, Happy hunting!

THIRD QUARTER MOON ON NOVEMBER 5 AT 01:36

NEW MOON ON NOVEMBER 13 AT 02:27

FIRST QUARTER MOON ON NOVEMBER 20 AT 03:49

FULL MOON ON NOVEMBER 27 AT 02:16

Deep Sky Imaging Target Highlights for November by James Yoder

The average low <u>temperature</u> for November in the Phoenix metro area is 53° F. November 13th is a new moon with Astronomical dusk at 6:52 pm and Astronomical dawn at 05:31 am, giving us 10:39 hours of imaging time.

In this month's list there are over 119 object/configuration combinations provided of just about every class of deep sky object including 5 Globulars, 18 Open Clusters, 19 Planetary Nebulas, 45 Nebula and 5 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 <u>Prospective Imaging Objects Guide</u> (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.

Configuration Page Object(s) 1		Туре	ImageLink	
Hyperstar	17	Open Cluster NGC-457 & Dolphin Nebula	OC, Nebula	<u>282 min</u>
Hyperstar	25	Soul Nebula (IC-1848)	Nebula	<u>130 min</u>
Focal Reducer	32	Flaming Star Nebula (IC-405)	Nebula	<u>250 min</u>
Primary Focus	20	Face on Galaxy M-74 (NGC-628)	Galaxy	<u>190 min</u>
Primary Focus	27	The Pleiades (M-45)	Open Cluster	<u>100 min</u>
Primary (Moon)	20	Little Dumbell Nebula (M-76)	Planetary Nebula	<u>240 min</u>
Primary (Moon)	28	Crystal Ball Nebula (NGC-1514)	Planeary Nebula	<u>88 min</u>

Some Highlighted Targets for October

Happy Hunting!

Resources:

- <u>ArtCentrics.com</u> <u>November Potential Targets Guide</u> (PDF download)
- <u>Telescopius</u> Lookup objects, plan imaging session.
- Field of View Calculator Test Different Telescope, camera & eyepiece combinations.
- <u>Astrometry.net</u> Solve images captured by your system. Get image RA/DEC, pixel scale, image size, orientation of the image you have taken.

EVAC Outreach Events

November Outreach Events:

• Friday, November 10 – 2nd Friday Riparian Star Party.

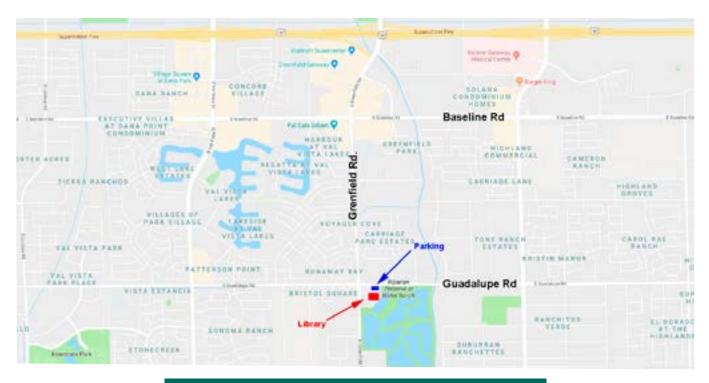
Details can be found on the EVAC website. Just go to <u>www.evaconline.org/events-meetings</u>. Click on the calen-

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 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 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 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 <u>Group</u>.

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

Highlighted Items:

- <u>Celestron CGX Mount</u> (\$2,900 new) Sale Price = **\$1,000**
- <u>Celestron GPS NexStar 8" System</u> Sale Price = **\$850**
- <u>Meade 8" SCT with tripod and fork mount</u> Sale Price = **\$550**

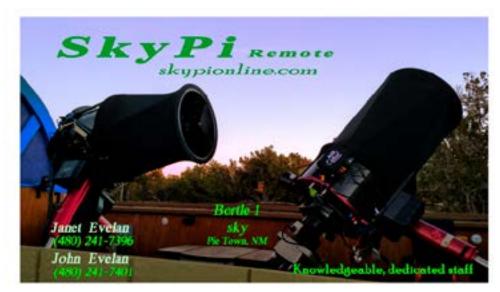
EVAC Equipment Rental Program

The East Valley Astronomy Club (EVAC) Is introducing a rental program for EVAC Members. Details on terms and equipment can be found on the <u>EVAC Rental page</u>. 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).
- Visual Filters for Deep Sky Objects: \$5 for 24hrs, \$15 for each week.
- Imaging Kit for Planetary & Moon Imaging: \$5 for 24hrs, \$20 for each week.

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.

Classified Ads



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



Classified Ads



NOVEMBER 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		

November 10 - EVAC Riparian Star Party

November 17 - EVAC Monthly Meeting

DECEMBER 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

December 8 - EVAC Riparian Star Party

December 21 - EVAC Holiday Extravaganza -SE Library Meeting Room – 7pm. EVAC will provide dinner, drinks and dessert. Bring holiday treats to share, if you wish

East Valley Astronomy Club - 2023 Membership Form

Janua	ry - June	used on the more	Individu \$30.00	•	Student (18yr+ wi \$20.00	th ID)
Renew Individu \$30.00	al Family	urrent Members Student (18yr \$20.0	+ with ID)	Astronomica	ll League: \$7.50 Annua	lly: 🛛
Name Ba □ \$10.00	0 1	aantity: ame to imprint:		Please	al amount enclosed: make check or money order ent will be made using PayP	
Name:				Phone:		
Address:				Email:		
City State Zip				URL For website		
	1.	r outreach program	9	Yes 🗆	No [-

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.

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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 President: Claude Haynes Vice President: Woody Sims Secretary: James Yoder Treasurer: Brooks Scofield Board Members at Large: Alex Beck, Steve Bradshaw, Dave Coshow, Tom Mozdzen, Don Wrigley **Events Coordinator: Claude Haynes** Property Director: James Yoder **Refreshments: Open Observing Program Coordinator: Wayne** Thomas AL Representative: Brooks Scofield Newsletter Editor: Marty Pieczonka Webmaster: Marty Pieczonka GRCO Webmaster: Brandon Feldman SkyWatch Coordinator: Claude Haynes **Observatory Manager: Claude Haynes**