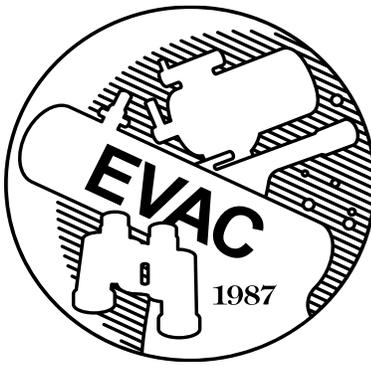


# THE OBSERVER



M33 The Triangulum Galaxy (APOD 11/12/2021)  
Image Credit and Copyright: [Bernard Miller](#)

## UPCOMING EVENTS:

The November 18th EVAC Meeting will be held both online via Zoom and in person at the Gilbert Library. The speaker will be Maitrayee Bose - Chemistry of Rocky and Icy Asteroids and Comets.

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## From the Desk of the President by Claude Haynes

Finally, IT'S COOL, and there are lots of cool things going on with EVAC. We finally returned to the All-Arizona Star Party with a good turnout and reasonable skies.

We had a strong Chandler Gilbert Community College response, and we have several events planned for this month and next. It really is a lot of fun to share your telescope with folks that may never have looked through an eyepiece.

Our November meeting is packed. First is a used equipment sale. There is a more specific announcement later in this issue. We will have

items arrayed on tables and available to view at 7:30pm. Just look – the sale starts at 7:45, so grab what you want to buy and take it to Alex or Brooks for checkout. After that we will hold a live auction for some larger ticket items. Proceeds benefit the club. Cash is best, but we will accept checks. We can't do credit card, but I am betting we can figure out a way to use PayPal. Unfortunately, this is for people actually at the library. We haven't figured out a way to do a sale via ZOOM.

Following the auction will be our regular business. It is time to elect officers and board members, so

# From the Desk of the President

by Claude Haynes

*Continued from page 1*

check the list later in this edition. The names listed are those who have submitted to run for an office. We are still taking names if you are interested. We really do need folks to step up and make the club more successful with their energy and commitment.

Our November speaker is Maitrayee Bose, who is an Isotope Cosmochemist and Laboratory Astrophysicist at ASU. She studies the chemistry of the rocky and icy asteroids and comets. The chemistry of these ancient bodies tells us a lot about the formation of the universe. It should be a really informative talk.

My final announcement is that in December we will hold

our 35th Anniversary Party. The date is Thursday, December 22 in the library meeting room and it starts at 7pm. We will not have our regular meeting due to Riparian After Dark. This special event runs from December 9 – 20 and prevents us from using the room on our regular Friday night. Join us for a fun party with the meal and beverages provided by EVAC. More details later. It will be a fun way to mark our history, as we prepare for a strong future.

Keep looking up.

Your President  
Claude Haynes

## EVAC Zoom Meeting Notes for 2022 October 21st, at 07:30 P.M. AZ Time

by Club Secretary Gordon Rosner

Greetings from your club Secretary.

We continue normal club operations with in-person monthly meetings with a Zoom simulcast. For this month's meeting we had 37 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 21 October General Membership Meeting. All our monthly meetings are recorded and are available to watch via links in our club's website and on our YouTube Channel 'EVAC Meetings'. 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 7:15PM with a 30 minute social gathering for in-person attendees. Water, ice, cookies, fruit, and vegetables were provided. At 7:45PM club President Claude Haynes welcomed those in attendance and our Zoom viewers. He mentioned that tonight was the club's observatory, GRCO's, birthday. It opened on this

day in 2006. He then recognized our eight new visitors in the audience. He then showed a list of current club officers and a slide showing club officer nominees that will be voted on by club members during our November General Membership Meeting.

Claude then showed a list of upcoming outreach events. If you want to volunteer for any of these events, contact our Outreach Administrator, Alex Nachman, via the Events Coordinator link at the bottom of the first page of our web site. Claude then announced that due to weather concerns, the All Arizona Star Party was postponed to 28 and 29 October.

David Coward, the President of the Gold Canyon Community, Inc (GCCCI), and Isabelle Petersen, the Chair of the GCCCI Dark Sky Committee, gave a presentation of the work being done on preserving the dark skies of Gold Canyon. The presentation given by Isabelle was quite detailed explaining the many aspects of preserving our night skies and how much efforts and work with the many different organizations is being done. I encourage everyone to watch this presentation as it shows just how much energy folks are putting forth to preserve our night skies.

Claude then gave an update on GRCO. He then explained how the club's sale of used equipment at the beginning of the November General Membership Meeting will be

# EVAC Zoom Meeting Notes for 2022 October 21st, at 07:30 P.M. AZ Time

by Club Secretary Gordon Rosner

*Continued from page 2*

conducted. Viewing of sale items will start at 7:30PM and the sale will start at 7:45PM.

Claude then announced this year's 35th anniversary Holiday Party will be held on 22 December, a Thursday, at the Library. The party will start at 7:00PM and is open to members and spouses/partners.

Claude then introduced our main speaker, Brooks Scofield. Brooks is a very active long time EVAC member who has performed club administration functions and has held many officer positions. Brooks is very interested in meteorites and is building up our club meteorite display. He opened by asking "What can you see at GRCO?". Answer is just about everything except meteorites. So, let's build a meteorite display! Our Board of Directors agreed and off went Brooks to work on that vision. So, to get the members excited, Brooks started his presentation with

a history of meteorites. He then went into the different types of meteorites and showed those meteorites that he has already gathered for the display. This was a very unique presentation with so much detail that it would take pages to describe all the information Brooks presented. So, you must watch his video on our club website to fully comprehend the depth of what Brooks presented on a subject that we all recognize but most do not know the details and science behind them. Great job, Brooks!

Claude thanked our presenters and those in attendance and on Zoom and reminded everyone that the next meeting will again be in-person and simulcast on Zoom on 18 November opening at 7:30PM. The meeting will again be at the library. Claude closed the meeting at 8:52PM.

Gordon Rosner  
EVAC Secretary

## EVAC Outreach Events

by Alexandra Nachman

We had some amazing events this month! A presentation on stars at the Southeast Regional Library went very well and was a lot of fun! The observatory was open at the Riparian and the folks who attended the presentation got to check out the night sky after. On October 25, there was an amazing night at the Chandler Gilbert Community College with over 80 attendees! They had a lot of fun looking at our night sky and learning all about our amazing planets. Thanks to those who were able to help out. It was greatly appreciated!

We are also looking for volunteers! We do many amazing and fun outreach events throughout the year at various locations! If you have a telescope and would like to share the night sky, we often host private star parties for schools and other businesses. If you want to share astronomy through presentations or fun activities, we would be more than happy to have you help out! If you are interested in volunteering to help out EVAC, please send an email to our event coordinator, Alexandra, at [events@evaonline.org](mailto:events@evaonline.org) or sign up for our Event Outreach List: <http://www.freelists.org/list/evac-outreach>.

**FULL MOON ON NOVEMBER 8 AT 04:02**

**LAST QUARTER MOON ON NOVEMBER 16 AT 06:27**

**NEW MOON ON NOVEMBER 23 AT 15:57**

**FIRST QUARTER MOON ON NOVEMBER 30 AT 07:36**

# The Backyard Astronomer

by Bill Dellinges

## Navigating the November Sky

When I step outside to gaze at the night sky, I typically look south. That's always been my *modus operandi*. From that vantage, one can survey the constellations as they pass across the meridian, their highest point during the night. In November you don't see much there! That's because the night sky in that direction at this time of year is filled with the so-called Watery Constellations: Capricornus, Aquarius, Pisces Austrinus, Pisces, and Cetus. They are very dim constellations. In light polluted skies they're darn near invisible. Aside from double stars that are always available no matter where you look, the only showcase deep-sky objects are NGC 7293, a planetary nebula in Aquarius and NGC 253, a galaxy in Sculptor. But if you look up to the zenith, you will see Pegasus the Winged Horse, the primary constellation of the fall season and depicted upside down as seen from mid latitudes. Its torso is formed by four second magnitude stars shaped like a box and appropriately called the Great Square of Pegasus. It should be pointed out the star in the upper left corner of the Square is named Alpheratz and was shared with both Pegasus and Andromeda until the I.A.U. assigned it wholly to Andromeda in 1928 as Alpha Andromedae. So technically, there's no Great Square of Pegasus anymore. Nevertheless, old habits die hard and most stargazers still see it as The Great Square.

While the southern sky this month is devoid of glitter for the most part, there are two bright stars that catch the eye. If you follow a line through the western two stars of the Great Square and extend it south, it takes you to Fomalhaut (magnitude 1.2), the lucida of Pisces Austrinus. Similarly, use the two eastern stars of the Square to travel south to Deneb Kaitos (mag. 2.0) aka Diphda and Beta Ceti. West of Scheat, the upper right star of the Square, one finds a smattering of faint stars representing the galloping legs of the horse. The lower right star of the Square

is Markab. The four stars west of it represent the equine's neck and snout. The last two stars of this string are handy in finding M15, an impressive globular star cluster. Just follow a line between Theta Pegasi and Enif northwest about half the distance between them and bingo, there you are.

Remember our friend Alpheratz, the upper left star in the Square? Two sets of three stars emanate from it running northeast forming the constellation Andromeda. It looks like a curving "V" lying on its side. Its middle set of stars are Mirach and Mu Andromedae. Conveniently, a line connecting them and extended northwest an equal distance (three degrees) takes you to M31, the Andromeda Galaxy. M31, 2.5 million light years away, is our closest major galactic neighbor. In a dark sky it can be seen with the naked eye as a faint smudge of light. It's a superb sight in a telescopes or binoculars because it's so close to us. To be fair, almost any major galaxy would be impressive if it was that close to us - only about twenty Milky Way diameters away. By the way, astronomers tell us the Milky Way and Andromeda galaxies are on a collision course as M31's spectrum shows a blue shift. It's closing at 68 miles per second (Sidney Wolff). Estimated arrival time - four billion years. The good news is, every second it should look better in your telescope.

When we look west we see that the Summer Triangle is still with us, with Vega, Altair and Deneb blazing away. To the east the precursors of the winter sky, Perseus, Taurus and Auriga peek above the horizon. The latter possesses the northern sky's forth brightest star, Capella. Looking north, the Milky Way rises in the northeast, passes through Auriga and Perseus and over the North Star. From there, it plunges into the northwest skies joining Cygnus, Aquila and Lyra, the three summer constellations that will soon be leaving us. The stars of their Summer Triangle will be giving way to a Winter Hexagon.

## EVAC 35th Anniversary Party

**Where – SE Regional Library**  
**When – Thursday, December 22**  
**Time – 7:00pm**

EVAC will provide a full meal. If you are interested in more spirited refreshment, you will need to bring your own. Open to members and spouses.

# Deep Sky Imaging Target Highlights for October

by James Yoder

In Addition to the deep sky objects this month we have a **Total Lunar Eclipse** on the early morning of November 8th. [Details here.](#)

The average low [temperatures](#) for November in the Phoenix metro area is 53° F. November 23<sup>rd</sup> is a new moon with Astronomical dusk at 6:48pm and Astronomical dawn at 5:39am, giving us 10:51 hours of imaging time.

In this months list there are over 108 object/configuration combinations provided of just about every class of deep sky object including 4 Globulars, 20 Open Clusters, 9 Planetary Nebulas, 43 Nebula and 4 Dark Nebula, and 28 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 November

Configuration	Page	Object	Type	ImageLink
Hyperstar	27	California Nebula (NGC-1499)	Diffuse Nebula	<a href="#">110 min</a>
Hyperstar	26	Pleiades (M-45)	Bright Nebula	<a href="#">159 min</a>
Focal Reducer	31	Tadpoles (IC-410)	Diffuse Nebula	<a href="#">305 min</a>
Focal Reducer	30	Foxface Nebula (NGC-1788)	Dark, Reflection Nebula	<a href="#">No Photo</a>
Primary Focus	24	Soul Nebula Region (IC-1848)	Diffuse Nebula	<a href="#">115 min</a>
Primary Focus	38	NGC-1961	Galaxy Cluster	<a href="#">150 min</a>

Resources:

- [ArtCentrics.com](#) – [November 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.

## EVAC 2023 Elections

Election of officers will be held at the November meeting. The current slate of Nominees is:

President – Claude Haynes  
Vice President – Alexandra Nachman  
Secretary – James Yoder  
Treasurer – Brooks Scofield

There are four positions available Board of Directors (Four positions available)

Alex Beck  
Steve Bradshaw  
Tom Mozdzen  
Woody Sims  
Don Wrigley

Our bylaws require us to post a slate of officers in October. Nominations are still open. Contact [president@evaonline.org](mailto:president@evaonline.org) if you are interested in running for any office.

# Used Equipment Sale

At our next regular meeting, November 18, we will be selling donated telescopes, eyepieces and accessories for the benefit of the club.

7:30 pm - viewing (don't remove any items)

7:45 pm - Garage sale starts - select items and take the information card to the Treasurer to pay.

Cash is preferred, checks with ID, we CAN'T take credit cards, but can accept PayPal.

Following the Garage Sale, we will have an auction of larger items:

- 14" Dob
- 7" Refractor
- SBIG camera

Minimum bids are established by the EVAC board, items not sold will be retained for future use or disposition.

You must be present to participate. We really can't conduct a sale via ZOOM. All items are AS IS and should be paid for and removed that night.

Some telescopes up for sale include Beginner/small aperture scopes:

- [PowerSeeker 127EQ](#)
- [NexStar 102GT](#)

Medium size telescopes and Optical Tube Assemblies including

- Meade LDX55 (10") Schmidt-Newtonian
- Celestron C-9.25 Schmidt-Cassegrain

Large size telescopes including:

- 7" Refractor (Meade 178 ED/APO EMC)
- 14" Truss Dobsonian (SkyQuest 14g).

If you want more information, select [this link](#) (PDF document) for a full list of items that will be up for sale.

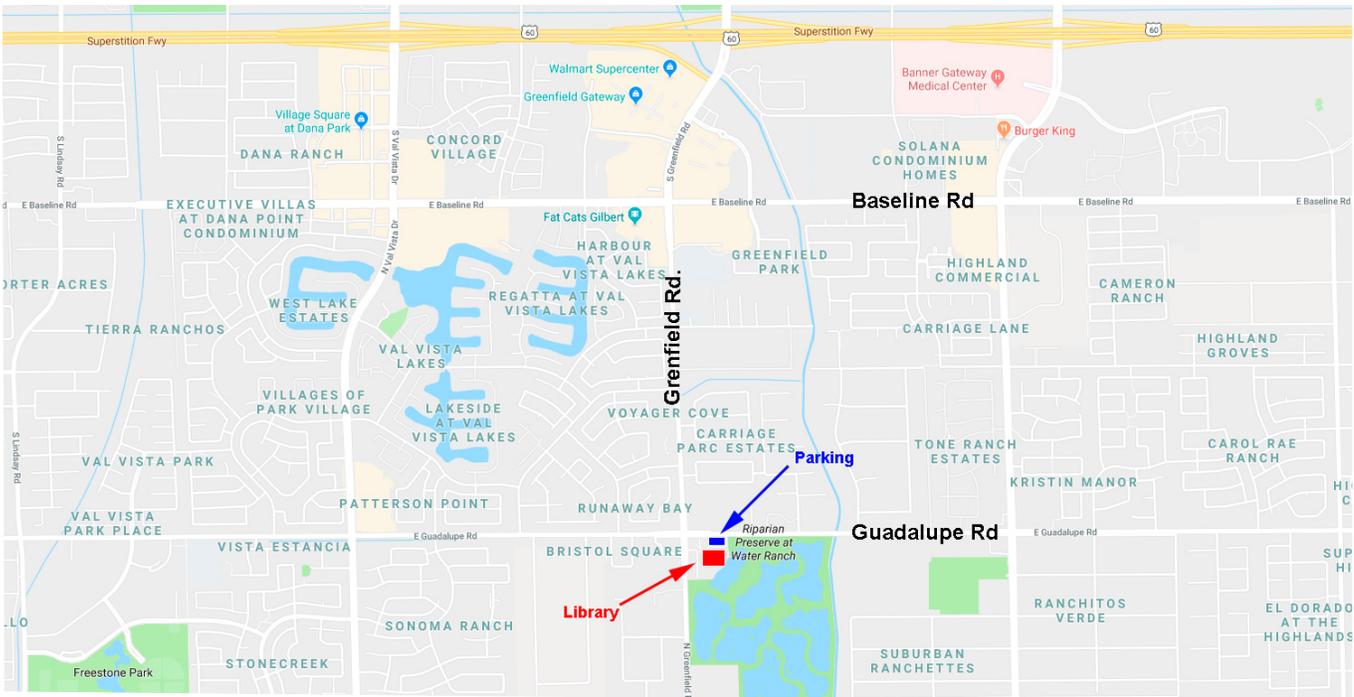
Monthly Meetings will be held in person and also presented live online using Zoom. See the EVAC Website for updates. All other events are on hold until health concerns are resolved.

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**



## 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](mailto:grco@evaonline.org) for information.

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The **Origins Project** is hosting an event in November at the Orpheum Theatre.

November 15 – Conversation between Richard Dawkins and Lawrence Krauss.  
November 16 – Panel discussion on Cosmology with NASA managers and Nobel Laureates.

Visit [www.originsproject.org](http://www.originsproject.org) and use promo code “originsvip” for a 50% discount.

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## Classified Ads

Kirk Keating is selling a set of equipment including a Televue 70mm Pronto telescope, numerous Tele Vue eyepieces and accessories. He has listed the lot at \$1,800. Contact him at [kirkkeating@gmail.com](mailto:kirkkeating@gmail.com) if you are interested.

Eric Monroe has a 6” Celestron CR-150-HD Refractor and an 8” Celestron Nexstar C8 Reflector with tripods and numerous eyepieces for sale. Contact him at [elsoldiablo@gmail.com](mailto:elsoldiablo@gmail.com) for pricing and details. b



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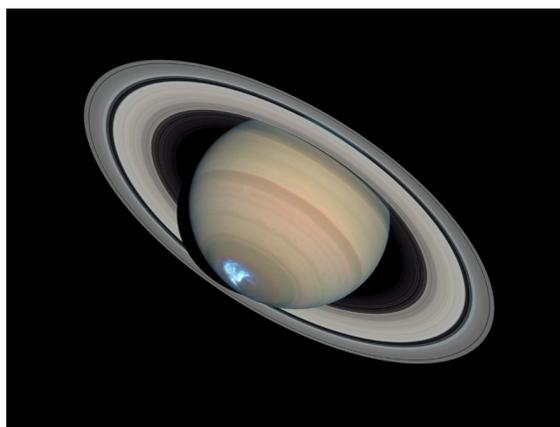
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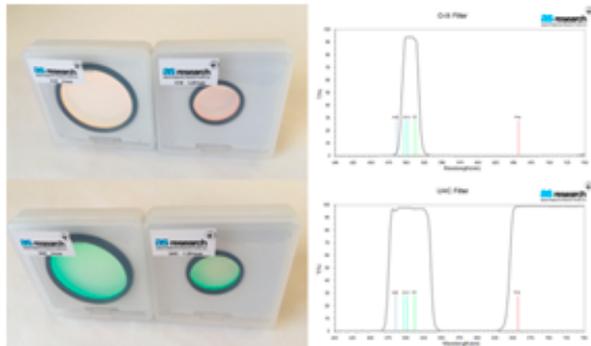
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## NOVEMBER 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9	10	<b>11</b>	12
13	14	15	16	17	<b>18</b>	19
19	20	21	22	23	24	25
26	27	28	29	30		

**November 11** - EVAC 2nd Friday Star Party at the Riparian Preserve.

**November 18** - EVAC Monthly Meeting Online via Zoom and in Person at the Gilbert Library.

## DECEMBER 2022

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
<b>18</b>	<b>19</b>	<b>20</b>	21	<b>22</b>	23	24
25	26	27	28	29	30	31

**December 8 - 20** - Riparian After Dark - visit Gilbert website for information and tickets .

**December 22** - EVAC 35th Anniversary Party

## 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 - June	<b>\$30.00</b>	<b>\$35.00</b>
July - December (Renew in January)	<b>\$15.00</b>	<b>\$20.00</b>

**Education Membership** (18 yr+ with ID)

January - June	<b>\$20.00</b>
July - December (Renew in January)	<b>\$10.00</b>

**Renewal** (current members only):

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

Astronomical League: \$7.50 Annually:

**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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East Valley Astronomy Club  
PO Box 2202  
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*President: Claude Haynes*

*Vice President: Open*

*Secretary: Gordon Rosner*

*Treasurer: Alexandra Nachman*

*Board Members at Large: David Coshow,  
Jon Koester, Bill Peters, Brooks Scofield,  
& Derek Youngson*

*Events Coordinator: Alexandra Nachman*

*Property Director: James Yoder*

*Refreshments: Open*

*Observing Program Coordinator: Wayne  
Thomas*

*AL Representative: Brooks Scofield*

*Newsletter Editor: Marty Pieczonka*

*Webmaster: Marty Pieczonka*

*SkyWatch Coordinator: Claude Haynes*

*Observatory Manager: Claude Haynes*