

THE OBSERVER



Celebrating Hubble With NGC 6751
 Credit: A. Hajian (USNO) et al., Hubble Heritage Team

UPCOMING EVENTS:

- EVAC Public Star Party - March 13*
 - EVAC Star Party - March 14*
 - EVAC Meeting - March 20*
 - Evac Star Party - March 21*
 - Messier Marathon - March 28*
- Check out all of the upcoming club events in the Calendars on page 11.*

From the Desk of the President by Gordon Rosner

Greetings from your President.

Our silent auction during the February General Assembly Meeting was certainly a success as it brought in \$2,493 to the club. Telescopes, eyepieces, books, cases, filters, diagonals, and more were up for auction and all were sold. Where did we get all this nice stuff to recycle back through the astronomy community? Donations. Just as people donate their time to club functions, people also donate equipment that they no longer use nor need. Some come from club members but most from the general public who knows of our club and wants to have it sup-

port our club and pass on the enjoyment that they had with it. Some donated equipment to us is turned around and donated to schools when we are notified of a desire there. Another community support that our club provides to further spread our passion for astronomy. A special thanks goes to Claude Haynes, our Observatory Manager, and David Hatch, our Properties Manager, for all the work they did that made this auction such a success.

I went to the Picket Post observing site for our monthly Member Star Party on Saturday evening, 22 Feb-

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From the Desk of the President

Continued from page 1

ruary. These are held at the Picket Post Trailhead near Superior on the Saturday closest to the 3rd quarter moon and the Saturday closest to the new moon. It's a nice fairly dark sky spot about a half hour drive east from the Gilbert South East Regional Library where we hold our monthly General Membership Meetings. For future dates and directions see the Monthly Meetings page on our website. I went there initially just to see who was there and what was going on that evening with the thought I'd just be there for a couple hours. It was so interesting and fun that I stayed to midnight.

The Picket Post Trailhead is very easy to find and the road getting there off highway 60 is nice enough that my very low ground clearance Honda Civic had no problem at all driving on it. Folks set up their telescopes at the side of the parking area where the headlights of the few cars that were leaving the trailhead did not bother us. This area is a popular astrophotography spot and that night certainly showed that. I started the evening talking to the trailhead ranger 'Host' that lives there in a house trailer. The Host is there 24/7 and oversees the area and is a safety comfort for us. The Host is very happy with us being there. There were seven telescopes set up with six of them doing astrophotography. If anyone is interested in doing astrophotography, this is the place to see it being done. DSLR cameras attached to the eyepiece holder to very sophisticated and dedicated astro-cameras were there. I talked with everyone there and everyone was so nice explaining their equipment and how it worked. If you are interested in starting astrophotography, the Picket Post Trailhead should be one of your first steps. And if you want to observe at a fairly dark sky area that is close by, that is the place to be.

All who were at the meeting saw Joe Gerencher's display of homemade spectrographs during the break. This was a great example of a member display. Do you want to help other members? Bring in a display item. Our club consists of all levels of astronomy experience with various interests. The telescope or equipment you use may be something that a member is thinking about getting and actu-

ally seeing it and talking to someone who uses it would be of great value to them and supports our club function of fellowship, learning, and sharing experiences. Anything from eyepieces through filters through telescopes would make informing display items. If it can fit through the door, someone is going to be interested in learning about it. Just remember safety is of utmost concern. So, any large items must be stable with the owner always supervising it during the break. Show up before the meeting and if needed, we can get a table set up for you.

Here's a few events coming up in March. On Saturday, 7 March is the Gilbert Outdoors Expo from 9:00AM to 2:00PM at the Riparian Preserve. This event was moved from the original 22 Feb date because of rain. Our GRCO observatory will be open for solar viewing with our Hydrogen Alpha telescope. Saturday, 28 March is the Messier Marathon hosted by the Saguaro Astronomy Club and supported by EVAC at the abandoned Hovatter airstrip site with information and directions on our website. Also on that same Saturday, 28 March from 4:00PM to 9:00PM is the Fountain Hills Third Annual Dark Sky Festival at the Fountain Hills Community Center.

I received a few more inputs for our 'Protostar Workshops' that are in development. Your Board of Directors will now start reviewing these and determining a plan for these beginner workshops.

I'll see you at the next meeting on Friday, 20 March starting at 7:30PM where our main speaker will be Dr. Patrick Young on the life cycle of large stars. Find me during the break and introduce yourself to me so I may get to know everyone who makes up our great club.

"Keep your feet on the ground and keep reaching for the stars."

Your President,

Gordon Rosner

EVAC General Meeting Notes for February 2020

by *Wayne Thomas*

The meeting was called to order by president, Gordon Rosner, at 7:35 p.m. Friday evening the 21st of February, 2020 in the Shakespeare Room at the Gilbert East Valley Regional Library. He then introduced the club officers (elected) and administrators (appointed).

Gordon covered several items under the President's Moment including – the silent auction, the Fountain Hills March 28 Dark Sky Festival at the FH Community Center (for info contact Ted Blank, tedblank@gmail.com), Volunteer opportunities, Badges, Clothing, Observing awards, Picket Post, and the Gilbert Outdoor Expo on Saturday, March 7. Two websites were mentioned: [evac-announce](#) which is used to inform the membership of interesting events, and [az-observing](#) which is a two way communication vehicle for anyone interested observing the sky. The Gilbert Outdoors and Expo event will occur tomorrow, March 7 from 9:00 a.m. until 2:00 p.m.

Janet Cotie provided information of the goodies and refreshments available during the break. Some special items are provided for those with dietary restrictions. Jan and Ron Barsted were roundly thanked for their past efforts on the refreshment front.

Two member presentations came next: David Douglass reported on the loss of images stored on AstroBin which occurred on February 16, 2020. The meta-data remains, but the images went into the "bit bucket!" Oops! The images will need to be reloaded by the owner. (No retrieval process exists for the lost images.)

Joe Gerencher presented several experiments on building inexpensive spectrographs from common components. His first experiment utilized a prism from an early overhead projector. He produced spectra using the drift

method with a 4" refractor and a Canon DSLR. His second experiment utilized a hi-end reflection diffraction grating (picked up for a song) and plumbing parts. With this spectrograph he created a composite solar spectrum. His third experiment used CDs/DVDs for the grating with which he was able to pick up the Telluric lines from sun light reflected from the moon. For his fourth experiment he compared the prism spectrum of Mercury to the diffraction grating spectrum of Mercury to show the difference between a linear display and a non-linear display.

After the refreshment break, Vice President Tom Mozden introduced the evening's speaker, Don Machholz the co-creator of the Messier Marathon list. In his presentation Don explained the evolution of the list culminating in 110 objects, and how some authorities recognize less than that number. He then explained how various observers had observed an ever increasing number of objects in one night, culminating in Gerald Rattley finally observing all 110 objects in one night. Don then took us through a marathon, showing how one could observe all 110 objects. To be successful, the time in March is important as well as "the Eyes, the Skies, and the Telescope." Don's final pitch was for Mini Marathons. A person can observe say one-fourth of the objects in the winter, another fourth in the spring, and so on. This way one can observe all 110 object over the course of a year, but save the time after midnight for sleeping!

The meeting was adjourned and we were out of the building by 10:00 p.m. Following the meeting, the Union Tap and Grill was an option for continuing astronomy discussions.

Wayne Thomas, Secretary
EVAC

FIRST QUARTER MOON ON MARCH 2 AT 14:57

FULL MOON ON MARCH 9 AT 13:48

LAST QUARTER MOON ON MARCH 16 AT 13:48

NEW MOON ON MARCH 24 AT 5:28

The Backard Astronomer

by Bill Dellings (February 2020)

For Binocular Nuts: The Taurus - Orion Panorama Cluster Group

OK, what the heck is this Panorama thing? I admit I made this grandiose term up, but didn't know what else to call it! Let me start at the beginning. In Matt Wedel's Binocular Highlight column in the January 2018 "Sky and Telescope" issue, he featured the "Stingray in the Sky" asterism. They're a clump of stars in eastern Taurus below Zeta Tauri and include stars 110, 111, 113, 116, 117, 119, 120, and 122 Tauri. It turns out this gangling bunch is also known as Collinder 65. When I first observed it in 2018, I thought it did resemble the shape of a Stingray.

Recently I took another look at the Stingray (Group A) with my Vixen 7x50 Foresta binoculars (7.10) but this time I did a little roaming and noticed more stars were pouring into my field just southeast of the Stingray. I thought wow, they're pretty cool too. Checking a star atlas revealed the brightest of those stars to be 129, 131, 133, 134, 135 and 137 Tauri (Group B). But wait, sliding due east from that group another blast of stars came into my view; this one bigger and with brighter stars than the previous bunch (Group C). I was then tempted to continue this harvest eastward, but the stars began to wane a bit so I retreated back to that third "clump" (Group C) and was beginning to wonder where I was exactly. An atlas check indicated I was in northeastern Orion, right where his raised right elbow is amongst the stars 69, 72, 73, 74, Xi, Nu, and to my astonishment NGC 2169, the "37" Cluster! Holy cow, I'd

looked at that cluster many times and had never noticed the rich band of stars in the region because I was using a telescope on the cluster, not a wide field instrument like a binocular – let that be a reminder of the usefulness of binoculars to enjoy this hobby of stargazing. In certain situations, binoculars can provide beautiful celestial views that telescopes simply can't compete with. Sometimes you want to see the Big Picture!

I find the best star atlas to use in finding this area is Chart 4 of the Bright Star Atlas 2000.0 by Will Tirion and Brian Skiff. I like this atlas because its six equatorial charts each cover four hours of right ascension and a declination range of + 500 to – 500. This provides the user with a large chunk of night sky containing many constellations, a kind of quick reference which (dare I say it again) allows the observer to see the Big Picture. The general area discussed here is where the constellations Taurus, Orion and Gemini converge at about 6 hours right ascension and declination +150. Note the three clusters of stars are roughly contained in a triangle formed by Zeta Tauri, Gamma Geminorum and Lambda Orionis. In my astronomically biased mind, I can't help seeing Gemini, to the northeast, as an open-ended rectangle (at least on its west end) forming a cornucopia from which spills the stellar gems of my Panorama.

Fountain Hills Dark Sky Festival

Date: Saturday, March 28, 2020

Location: Fountain Hills Community Center, 13001 N. La Montana Dr., Fountain Hills, AZ 85268

Please RSVP to Ted Blank (tedblank@gmail.com) if you can bring a scope.

Start time for festival: 4:00 pm

Start time for observing: 7:30 pm (solar at 3pm if you wish to do that)

End time: 10:00 pm

Comments: Third annual Fountain Hills Dark Sky Festival. Event is free to the public. Volunteer astronomers will receive \$10 cash toward delicious food truck food, and a

free "Dark Sky Festival" wine or beer glass (your choice). Beer and wine available, live music outside, lots of fun booths inside. Liberty Wildlife, Community Garden, FH Library will have kids activities too. Bring the family!

Special parking will be provided for astronomers to unload and load. South side of Fountain Hills Library in the parking lot.

Solar observing will start at 3:00 pm through dusk, then evening observing from 7:30 until 10:00 PM. All scopes welcome, average attendance last 2 years was around 1000.

More info at www.fhdarksky.com.

March EVAC Events

by Gordon Rosner

Ken Milward stepped down as our club's outreach and events coordinator to further pursue his retirement travels and activities. Ken will continue to coordinate the scheduled MMT Mt. Hopkins telescope tour scheduled for Friday, 24 April for those club members who have signed up. The tour is full, but if interested, check with Ken to see if any openings may have come up. I am now filling in as the outreach and events coordinator until a replacement can fill this appointed leadership position.

During February, our outreach volunteers continued to support local school science event star parties by bringing their telescopes to the schools for viewing. You can check the calendar in our website for those we did and those upcoming. A memorable one was the Chandler Gilbert Community College star party that EVAC supports at the college every semester. A nice clear evening allowed clear views for their astronomy club and other student guests. This is a more popular event with EVAC and our volunteers are getting known by the college administrators.

Our school outreach events last an hour or two and the time really flies as our young viewing guests get excited about actually seeing the objects they may have studied. Lots of "OH WOWs". If interested in joining us with these school outreach events, let me know via the 'Contact Events Coordinator' link at the bottom of the main page of our website. Any telescope is welcome and the more diversity of the scopes the more fun. Volunteering for our outreach events is a very fun and rewarding activity as we inspire the next generation of astronomy enthusiasts.

Our GRCO Observatory Manager, Claude Haynes, has been supporting science day events at the annual Arizona Renaissance Festival for quite a few years now. Two days of the festival event is dedicated to bus loads of students all over the valley. A few bus loads of kids outside the val-

ley also attended. Besides the festival activities being open to only students for the day, science displays are also on the grounds. Claude brings his Hydrogen Alpha telescope for solar viewing as a service of our club. Since Claude has hundreds of kids viewing the sun during the event, I decided to help out this year and bring my own Hydrogen Alpha scope along. What a busy day with 475 students viewing a nice solar flare developing during the day! Another example of how our club supports our community with outreach events.

February 27 brought cloudy skies to the Cortina Elementary School event in Queen Creek. EVAC supported the school during the 5:00PM to 7:00PM science event by providing an astronomy display along with three telescopes for viewing after the Sun set. The clouds thinned out near the end of the event allowing Claude Haynes and Frank Pino to provide a few views of the Moon and Venus while I manned the display. The display included information about EVAC and GRCO, a Moon globe, a Sun globe showing how many Earths could fit in it, an Earth timeline poster, a Sun information poster and miniature telescopes that displayed the differences between reflector and refractor designs and how they worked. A TV monitor also showed a slideshow collection of Hubble images throughout the event. Another great outreach event with this unique opportunity to provide an astronomy display table along with telescope viewing.

Again, if interested in volunteering to support these fun and rewarding events, contact me via the 'Contact Events Coordinator' link on our website (events@evaonline.org) at the bottom of the main page on our web site located at evaonline.org.

Gordon Rosner
EVAC Outreach Events Coordinator

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 on the Contact-Us tab. 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 that may be of interest is AZ-Observering. To subscribe click <http://www.freelists.org/list/az-observing>.

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](#).

Looking for that perfect weekend activity?

Why not resolve to getting involved?

Contact Claude Haynes to join the staff at GRCO

Email: grco@evaconline.org

EVAC Logoed Clothing

We now have clothing inventory of polo shirts in various sizes and colors and hats. If you ordered clothing, it will be available at the March meeting. If you didn't order, you can select an item at the March meeting and get immediate delivery. We have one 2XL navy-blue hoodie for sale. Please see Brooks or Tom at the next meeting.

Contact Tom Mozdzen at vp@evaonline.org if you have questions.

Classified Ads

FOR SALE: Unitron 4-inch Equatorial Refractor Model 152

Classic Unitron from 1965 complete with:

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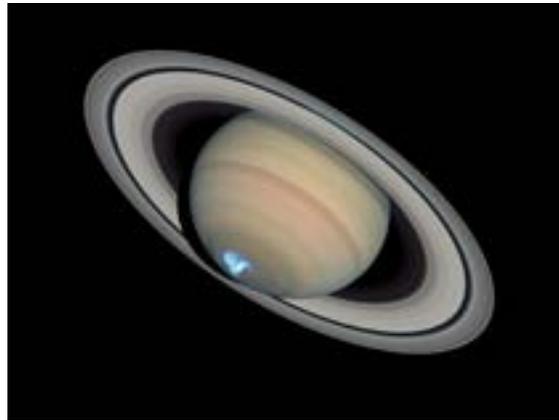
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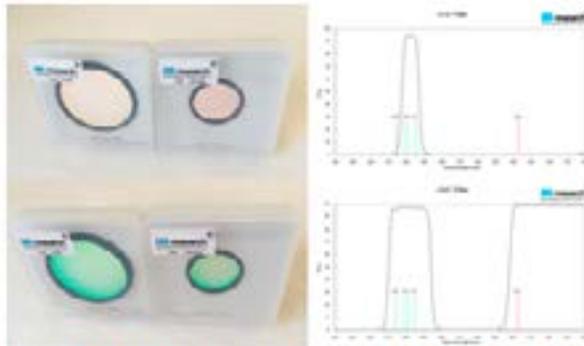
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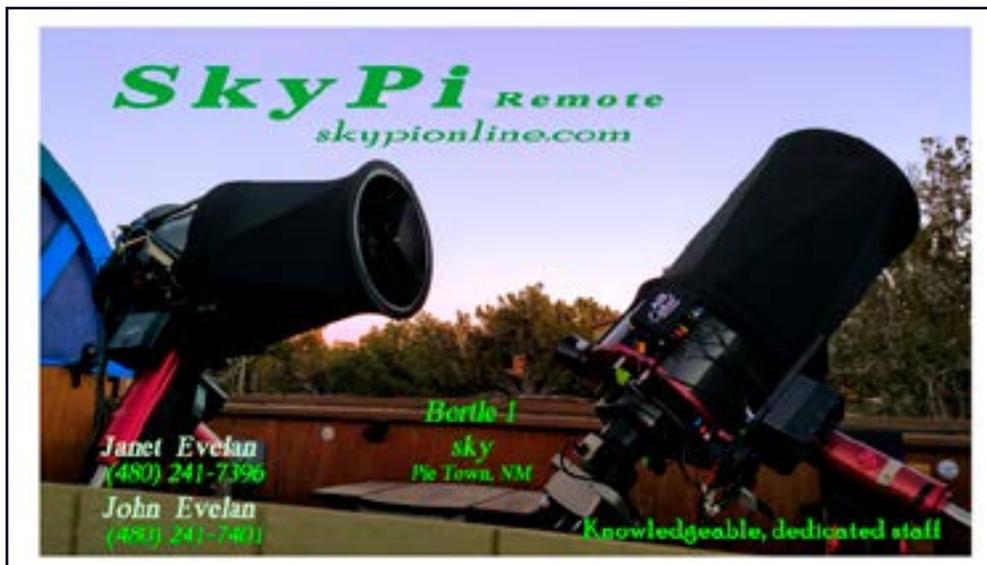
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Classified Ads



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From the site: Very Large Array 42mi E, The Astronomical Lyceum 55mi E, MRO Observatory 80mi E

IC 405

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[SkyPi Remote Observatory](#)



Upcoming Meetings

March 20

April 17

May 22

June 19

July 17

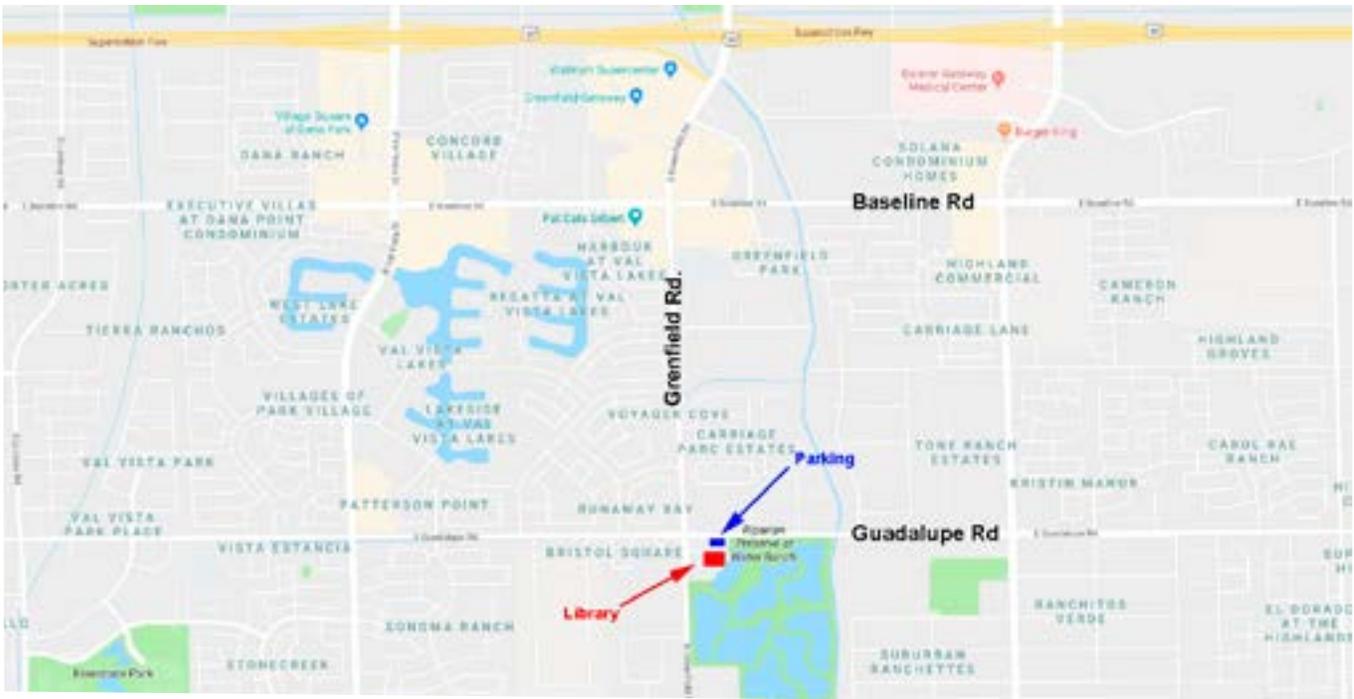
August 21

September 18

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 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



MARCH 2020

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				

March 5 - Pomeroy Elementary

March 7 - Gilbert Outdoor Expo -
GRCO Solar Observing

March 13 - Public Star Party

March 14 - EVAC Star Party

March 20 - EVAC Monthly Meeting

March 21 - EVAC Star Party

March 26 - Islands Elementary

March 28 - Messier Marathon

APRIL 2020

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		

April 7 - Kyrene de la Mariposa

April 10 - Public Star Party

April 17 - EVAC Monthly Meeting

April 18 - EVAC Star Party

April 25 - EVAC Star Party

East Valley Astronomy Club – 2020 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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www.evaonline.org

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