

THE OBSERVER



Trifid of the North - January 30, 2009
Image Credit & Copyright: Don Goldman

From the Desk of the President by Gordon Rosner

Greetings from your President.

First, the big news! During the November Zoom online General Membership Meeting, the candidates for the 2022 Board of Directors were presented for the membership vote. It was agreed unanimously with 45 members voting. The following are our club officers for the 2022 year:

- President: Claude Haynes
- Vice President: Open
- Treasurer: Alexandra Nachman
- Secretary: Gordon Rosner
- Board Members at Large:
 - David Coshow
 - Jon Koester
 - Bill Peters

- Brooks Scofield
- Derek Youngson

Notice that Vice President is listed as 'Open' from having no volunteers for that position. However, the rest of the club officers are very experienced and can make sure the duties are performed during the interim until the position is filled. So, if anyone is interested in this position, please let a club officer know. You will have the entire club Board of Directors helping you throughout the year.

UPCOMING EVENTS:

All meetings will be held online.

EVAC Meeting via Zoom - December 17th.

Member Presentation Night.

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From the Desk of the President

by Gordon Rosner

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On behalf of the club, I want to welcome the new club officers who will take their seats starting January, 2022.

As your president for the last two years, I want to thank the current club officers and administrators for all the work they have done to keep the club prospering during these challenging times. I know many astronomy clubs that have struggled and some that have dissolved. But our club has remained strong and actually has helped some other clubs survive through these times. We transitioned to online meetings containing amazing main topic presenters and interesting member presentations that are seeing us through this pandemic. But as I always say, the most important part of the club is YOU. You are the club and your support with attendance in our monthly online meetings has made sure the club remains a premier astronomy club. Like everyone, I am anxious for the day we open the club back up to in person meetings, Star Parties, and Public Outreach events. We have missed all those functions so much. The decision to reopen will be made by the club's Board of Directors.

Our GRCO observatory's small private viewings on Sunday through Thursday evenings continues to be working so well that our club's Board of Directors voted to continue GRCO being open to the general public on Saturday evenings, sundown until 9:30PM. However, these public events will only be open once during December. That will be on Saturday evening, 4 December due to special December events by the Town of Gilbert and the Christmas holiday. Also due to the New Years' holiday, Saturday evening public viewings will return on 8 January.

As of the publishing of this newsletter, the launch of the James Webb Space Telescope has slipped slightly to 22 December due to additional testing required resulting from an incident when the release of a clamp band caused a vibration throughout the observatory. The telescope remains at the European Space Agency's launch facility near Kourou, French Guiana, a region on the northern Atlantic coast of South America. Hopefully, we will all have a holiday gift of a successful launch. I'm starting to get nervous even though the Ariane 5 is a proven reliable launch vehicle with only thousands of things that must run perfectly.

Normally (pre-pandemic), the club has its annual December Holiday Party on the Thursday before the scheduled

Friday meeting. Because of us still not having in person events, we will continue with an online Zoom meeting on Friday, 17 December starting at the usual 7:30PM. However, this meeting will be a special end of the year meeting! Instead of a main speaker, the Board of Directors has agreed to have the entire meeting devoted to member presentations! What a great way to have our members tell us about their astronomy adventures collectively during one meeting. So, join in on the fun by presenting a 10 to 15 minute presentation. Anything goes as long as it is astronomy related. Just let me or Tom Mozdzen, our Vice President, know. You can also use the links at the bottom of the main page of our club website. Join us on 17 December for a meeting full of surprise holiday presents!

As always, every month, a reminder that there are three ways to receive a notification link via an email to register for the next online monthly General Meeting. Membership in the club is not needed as our meetings are open to all and we encourage all club friends to join our online meetings with us. You only need to do one of the following and only once to continue to receive the email on how to register for the upcoming meetings:

1. Send a one-time email request to vp@evaonline.org.
2. Sign up for the evac-announce@freelists.org mailing list. Directions on how to do this and the link are included later in the 'Find Out What's Happening' section of this newsletter.
3. Sign up for the AZ-observing@groups.io mailing list. Also here, directions on how to do this and the link are included later in the 'Find Out What's Happening' section of this newsletter.

A way to get notifications of any special online events and how to register, is to join the EVAC Facebook page and occasionally check for special event announcements. The link to join is provided in the 'Find Out What's Happening' section of this newsletter. These events will also be announced during our monthly General Meetings. I'll 'see you' at our 17 December special holiday meeting full of member presentation surprises!

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

Your President,
Gordon Rosner

EVAC Zoom Meeting Notes for 2021 November 19th, at 07:30 P.M. AZ Time

by Wayne Thomas

Here are the Meeting minutes including details of the presentation. (The recorded video of the meeting can be viewed at: [EVAC Zoom Meeting Minutes 2021-11-19](#).)

President Gordon Rosner welcomed those in the “audience” to the virtual meeting shortly after 7:30 p.m. His first slide displayed the meeting agenda:

- Welcome
- Introductions
- Officer Elections
- Club News
- Main Presentation: Science journalist and author Jeff Kanipe, speaking on “Peculiar Galaxies Touchstones in Galaxy Classification, What makes a Peculiar Galaxy Peculiar?”

Gordon began the meeting with his welcoming slide “Live Long and Prosper.” He again listed the club officers, both elected and appointed, in anticipation of electing new officers for the coming year. The official results of the election will be listed in the president’s column in the December Observer.

As an aside, Gordon commented on the extensive group of images on the EVAC Facebook page of the Lunar Eclipse from early Friday morning (same date as the EVAC meeting).

Regarding the election of officers, all positions have a candidate except for the Vice President which is vacant. All members were instructed to vote for the presented slate of officers via the Chat function on Zoom with either a YES if in favor, or a NO if opposed. The voting was closed at the end of the Zoom meeting.

Under Club News, Gordon reported on the successful opening of GRCO to the general public. However, all other personal contact events remain cancelled until the pandemic becomes under better control. Member articles may be submitted to the president via the link on the main page of the EVAC website. And the meeting is being recorded for future viewing by those interested. Our next meeting will be a special Zoom meeting on December 17 featuring individuals who wish to share their success or challenges in their astronomy endeavors. Those wishing to present should contact the president via the link on EVAC’s home page.

Tom Mozden next introduced the main speaker, Jeff Kanipe, who has asteroid number 84447 named after him. Jeff is an author of “Annals of the Deep Sky,” a multi volume series including deep sky objects in all 88 constellations. The most recent, Volume 8, is available from: [shopatsky.com](#). The American Astronomical Society has committed to make all volumes available. The remaining volumes are in the works.

Jeff began by describing the history of the concept of (and name of) galaxies and how astronomers have attempted to classify them. He contrasted Arp’s list of peculiar galaxies to the tuning fork classification created by Hubble and enhanced by Sandage and de Vaucouleurs. Jeff described several Arp peculiar galaxies, describing how they did not fit into the existing classification scheme. The previous classification of irregular galaxies is represented by many in Arp’s catalog of peculiar galaxies. Jeff proceeded to describe physical processes which may cause the peculiar galaxies to appear the way they appear in images taken today. He noted that this is a snapshot in time and may not resemble their appearance earlier nor their appearance in the future (that is on a cosmological time scale). Zwicky was one of the earliest to suggest that dynamical interactions between galaxies may result in some of the observed peculiarities.

In conclusion, Jeff suggested that there are no “normal” galaxies. Each one is unique and has some sort of peculiarity.

Following his description of several processes and observed types of peculiarity, Jeff fielded the following questions:

What defines a galaxy as distinct from say a globular cluster? Some globular clusters may be the remnants of the cores of dwarf galaxies, so there is a fuzzy boundary between dwarf galaxies and globular clusters. Note – some globular clusters are associated with star streams extending behind them.

Where can I purchase a copy of your Annals of the Deep Sky? Go to [shopatsky.com](#).

Tell us more about the apparent spike extending from Arp 192. For each image I review in my columns I chal-

EVAC Zoom Meeting Notes for 2021 November 19th, at 07:30 P.M. AZ Time

by Wayne Thomas

Continued from page 3

lence the observer to see if they can observe it. The answer came back that the spike is no longer there. Then we had to come up with an explanation. Calculating backwards, it was determined that an asteroid was there at that time. If globular clusters result from mergers of dwarf spheroidal galaxies, could mergers explain irregular galaxies? Irregular galaxies are disturbed galaxies, not merged galaxies.

Could Infrared and X-ray images produce a new classification scheme for galaxies? There will be no tuning fork classification for images in these regions. This is a no-man's land for classification.

How does dark matter affect the interaction between galaxies, and how will it affect the morphology over time? The dark matter comes along with the galaxy. The visible galaxy is enshrouded within the dark matter cloud as we understand it today.

What about "ghost galaxies?" These isolated galaxies tend to be small.

A recent article in Astronomy Magazine suggests that globular clusters are simply an extension of open clusters formed in the very early universe which have evolved over time into their now familiar form. How does that fit into your understanding of peculiar galaxies? I'm not sure I agree with that assessment.

EVAC's next meeting will be a special one with short presentations on Friday December 17.

Gordon reported that the slate of officers had been approved unanimously and adjourned the meeting at 8:42 p.m. with an attendance of at least 80.

Wayne Thomas,
Secretary EVAC

The Backyard Astronomer

by Bill Dellings

In Defense of CATS (Catadioptrics) December 1998

I see an alarming trend lately to bash Schmidt-Cassegrain telescopes (SCT's). Terms like "A piece of Schmidt" and "Schmidt Catastrophe" are, unfortunately, growing in popularity.

At the heart of the matter is the optical performance (or lack thereof) of such instruments. The criticism is that a good refractor or Newtonian reflector with a small secondary mirror will outperform a typical SCT. These "catadioptric" telescopes have a somewhat large secondary mirror compared to other types of scopes that result in mushy star images and loss of contrast. A C-8, for instance, has a secondary obstruction $2\frac{3}{4}$ " across. This is 34% of its aperture or 11.8% of its primary mirror surface. I'm amazed that you can see anything through these scopes with those huge secondaries mounted on their corrector plates! But they work, and surprisingly well. Nevertheless, I think it's probably true that SCT's come in last, performance wise, after refractors and long focus Newtonians.

But hold on! Optical performance is a relative term. I have seen hundreds of people over the years gasp in amazement at views of Saturn and other celestial objects in my trusty old C-8. Tell them those optics are inferior.

Now, I'll be the first to admit that I've looked at some terrible images in a few SCT's over the years. These poor performers might have been out of collimation, not reached thermal equilibrium, or a lemon that somehow got by quality control. But I argue that for a general - purpose telescope, an SCT is hard to beat. I will never forget seeing M13 for the first time through my C-8 (1974). Instead of the amorphous blob I'd seen in my 4" Unitron refractor, I could actually resolve stars to the core! All this in a 30 pound package I could pick up and move from the house to the yard in a minute. Other attributes: A closed tube (the mirror is still clean as a whistle); A long focal length (2000mm) rendering higher powers with given eyepieces; The short tube keeps the eyepiece positioned close to a seated observer.

The Backyard Astronomer

by Bill Dellinges

Continued from page 3

To be fair, it should be pointed out SCT's on fork mounts are murder to aim at objects close to the north celestial pole. They also have small field of views, about 1/2 of a degree at low power. A F6.3 focal reducer is available from Celestron and Meade for just over \$100 that works great, yielding a 1.28 to 1.66 degree field of view at 39x with a 32mm e.p. (50 or 65 degree apparent field). With it, I can see all of the Pleiades, or M31 and its two satellite galaxies.

To summarize, I do not hesitate to recommend a SCT to someone shopping for a telescope and feel derogatory references to them are unfair. Just be sure it's performing as well as can be expected for a SCT and in collimation (ask an experienced observer to assess its optics). Return the instrument if it's not up to par. I'm sure Messier would be quite happy with my C-8.

Deep Sky Imaging Target Highlights for December

by James Yoder

The average low temperatures for December in the Phoenix metro area is 45° F. December 04 is a new moon with Astronomical dusk at 6:48pm and Astronomical dawn at 5:48, giving us 11 hours of imaging time.

In this months list there are 147 object/configuration combinations provided of just about every class of deep sky object including 3 Globulars, 19 Open Clusters, 9 Planetary Nebulas, 38 Nebula, 30 Galaxies/Galaxy Clusters, and 1 Dark Nebula.

The [Prospective Imaging Objects guide](#) (PDF download) covers objects that reach their highest point in the sky and crosses 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 December

Configuration	Page	Object	Type	ImageLink
Hyperstar	20	M-45 (Soul Pleiades)	Diffuse Nebula	159 min
Hyperstar	23	NGC-1788 (Foxface Nebula)	Dark Nebula	No Image
Reducer(0.7)	26	NGC-1055,1931 (Spider & fly) 2 frame composite	Diffuse Nebula	335 min
Reducer(0.7)	32	M-78	Bright and Dark Nebula	No Image
Primary Focus	22	NGC-1579 (Trifid of the North)	Planetary Nebula	No Image
Primary Focus	19	IC-342	Barred Spiral Face-On Galaxy	235 min

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 Outreach Events

by Gordon Rosner

Again, unfortunately another very short column this month. All outreach events remain cancelled due to supporting the public health concerns. For more information, see the President's column at the beginning of this newsletter or at the top of the EVAC website.

As always, still looking very forward to our outreach program getting back and to hearing all those "OH WOW's" we so love to hear.

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 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](#).

NEW MOON ON DECEMBER 4 AT 00:43

FIRST QUARTER MOON ON DECEMBER 10 AT 18:35

FULL MOON ON DECEMBER 18 AT 21:35

LAST QUARTER MOON ON DECEMBER 26 AT 19:23



[SkyPi Remote Observatory](http://skypionline.com)

The darkest, most Pristine, sky in the continental U.S. !

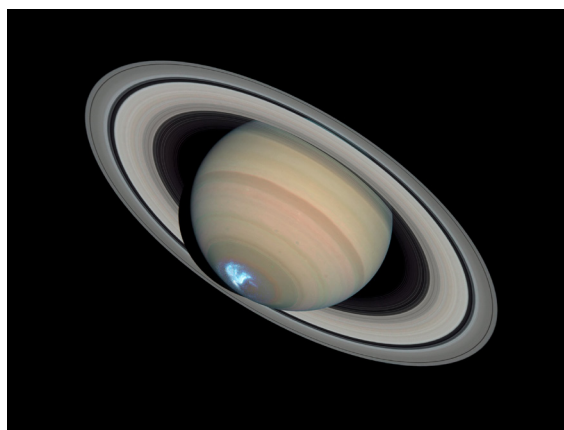
At the site: Bathroom facilities, running water, 5 pads w110v, wifi, acres of grassy camp sites.

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

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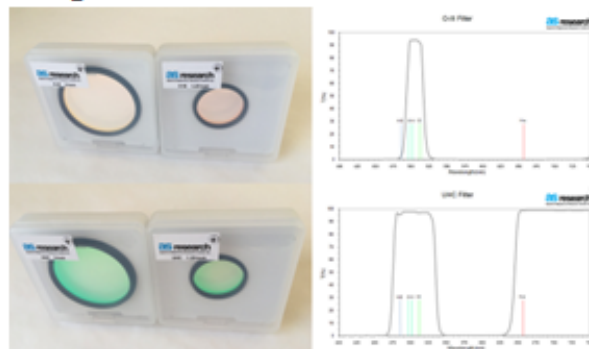
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in
Arizona



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www.apache-sitgreaves.org

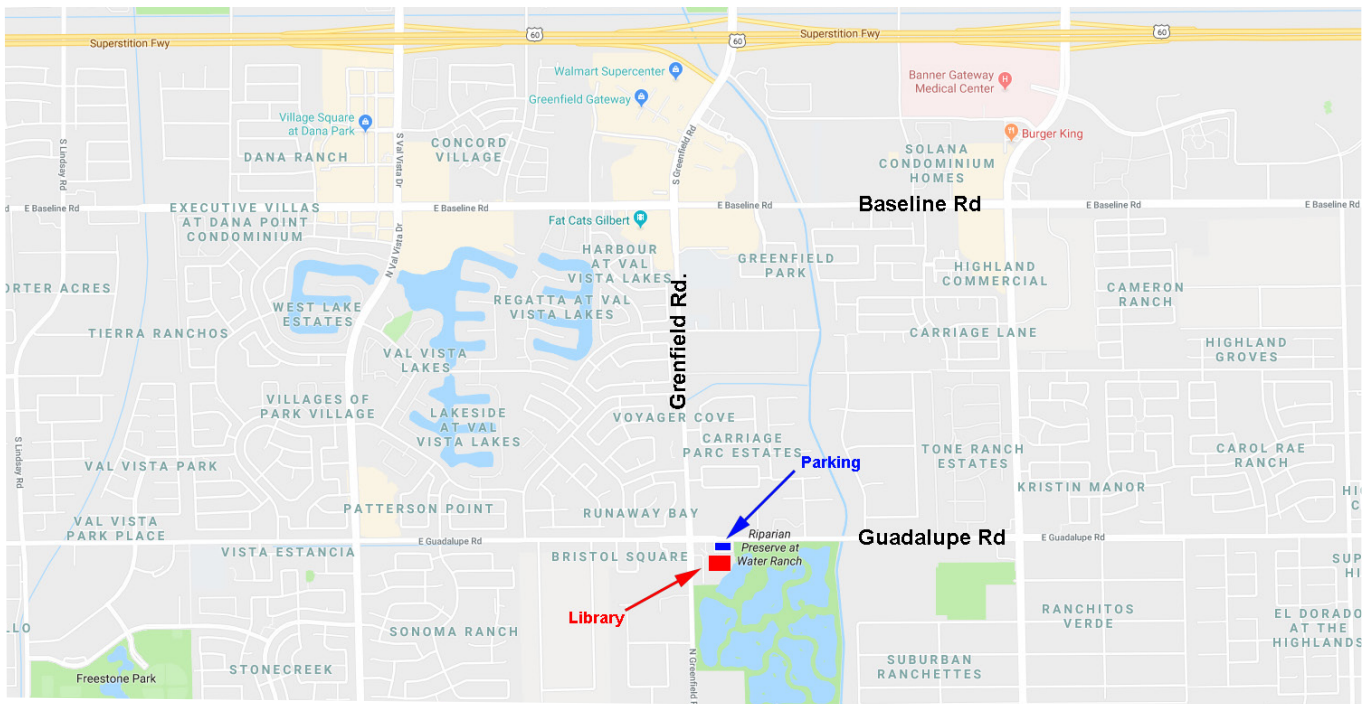
Monthly Meetings will be presented live online using Zoom. See the EVAC Website for updates. All other events are on hold until health concerns are resolved.

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 temporarily been cancelled. and are replaced with an online Zoom meeting.

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



DECEMBER 2021

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	

December 17 - EVAC Monthly Meeting Live

Online via Zoom.

The EVAC Monthly Meeting will be held live online via Zoom. All other meetings and events have been cancelled until further notice.

JANUARY 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

January 21 - EVAC Monthly Meeting Live Online
via Zoom.

The EVAC Monthly Meeting will be held live online via Zoom. All other meetings and events have been cancelled until further notice.

East Valley Astronomy Club — 2021 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): <input type="checkbox"/> \$30.00 Individual <input type="checkbox"/> \$35.00 Family	<input type="checkbox"/> Astronomical League: \$7.50 Annually (per person)
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Name Badges: <input type="checkbox"/> \$10.00 Each Name to imprint: _____	Quantity: _____
--	------------------------

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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