

THE OBSERVER



The Eskimo Nebula from Hubble
 Credit: Andrew Fruchter (STScI) et al., WFPC2, HST, NASA

UPCOMING EVENTS:

- EVAC Public Star Party - February 14*
 - EVAC Star Party - February 15*
 - EVAC Meeting - February 21*
 - Evac Star Party - February 22*
- Check out all of the upcoming club events in the Calendars on page 12.*

From the Desk of the President by Gordon Rosner

Greetings from your President.

We had a very interesting January meeting with over 90 people attending highlighted by our main speaker, Chris Groppi, who gave a presentation on telescope balloon missions. This is something we don't hear much about but certainly is a fascinating aspect of our astronomy passion. Please see Wayne's summary later in this newsletter. Also, don't miss our future club meetings as we always have fascinating professionals give us interesting presentations.

I also would like to point out that a focus for 2020 through the year is

short member presentations. If you can give a 10 minute or so presentation about what you are doing, what you have done, or describe equipment you have, just let me know via the [Contact President](#) link on our web site and I will schedule you in. You can also bring in a display, your telescope, or other equipment to have set up so you can describe and discuss it during our meeting breaks. Remember, someone there may be thinking about buying the same equipment you have and actually seeing it and discussing it with you would be a great help. Or, someone may have the same equipment and you can help them with it.

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From the Desk of the President

Continued from page 1

We have a very interesting February meeting coming up. There'll be a silent auction during the first part of the meeting. So, be sure to come early and check out the items you may want to bid on. The silent auction is when you write down the amount you are willing to pay for the item. You can see the amounts other folks are willing to pay, so you can write down your bid accordingly. If you are focused on a particular item, you have to keep an eye on the last bid as you may want to increase your bid above the last one entered. See the list of items up for auction later in this newsletter.

This year's annual Messier Marathon will be held on Saturday night 28 March at the same location where we hold the All Arizona Star Party. That is, the Hovatter Airstrip (Salome Emergency Airstrip) in La Paz County, AZ about an hour's drive from the east valley. Directions are in our web site under 'Events and Meetings'. This event is hosted by the Saguaro Astronomy Club with our club helping out and everyone and anyone are welcome to attend. There'll be drawings for items in the afternoon with tickets being sold at the site. Dinner of pulled pork sandwiches with other goodies will be provided there for five dollars a plate. To get all of us ready for this popular event, the February meeting's main speaker will be Don Macholtz who will be presenting the history of the marathon and how it works. This presentation will be helpful for both beginner marathoners and the seasoned observers. So, if you are interested in participating in the marathon for the first time, Don's presentation will be very valuable.

Your Elected Officers and appointed Administrative Managers have started to discuss our 'Protostar Workshops' vision. These informational workshops will be designed for those just getting started in astronomy and our fledgling club members wanting to learn more and gain some information and tips using telescopes. We have already received some excellent inputs but need more from you, especially those who may be interested in attending these workshops and the subjects they would like to see. Also, if you would like to participate as a presenter, this would be an excellent way to support our club and share your knowledge. Your club officers will start drafting these workshops after the February meeting to be sure to get as many inputs from club members as possible. You can also send your thoughts directly to me via the Club President link in our club web site. This is your club and we need your inputs.

Remember that there's now a suggestion box at all our meetings. Please submit any suggestions and general comments you may have. The box is also an excellent vehicle for your inputs for the 'Protostar Workshops'. Or, mention your thoughts to one of the club officers during our meeting breaks.

Everyone remember to sign up for the EVAC-Announce FreeLists mailing list so you can receive information about club activities and events via your email. Sign up is easy and available on our web site. Also remember that if you want to help with our outreach programs and events, sign up for EVAC-Outreach FreeLists mailing list also on our web site. You will then be notified of upcoming outreach events that you may be interested in participating in. Our Outreach Manager, Ken Milward, can use your support both with telescopes and just being there to answer questions and perform 'crowd control'. Our outreach programs are educational events disguised as fun for all. Remember that these FreeLists are one-way only that you receive from the club officers. You receive the announcements but cannot answer them via the FreeLists. So, you will not receive a bothersome stream of follow-on emails like other mailing lists. For any questions from these FreeLists mailings, you must email the appropriate club officer per our web site.

Remember that club dues are now due for 2020. See our treasurer, Brooks Scofield, at our meeting, or renew via our club web site. Dues are \$30 for an individual annual membership and \$35 for an annual family membership. You can also pay for an annual Astronomical League membership for an extra \$7.50.

Our next general meeting will be Friday, 21 February starting at 7:30PM in the Gilbert South East Regional Library on the south east corner of Greenfield and Guadalupe. Our speaker will be Don Macholtz who will be presenting the history and methods of the upcoming Messier Marathon. I hope to see you all at the meeting. Everyone remember their new year's resolution to attend all our club meetings.

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

Your President,

Gordon Rosner

EVAC General Meeting Notes for January 2020

by *Wayne Thomas*

The meeting was called to order by president, Gordon Rosner, at 7:30 p.m. Friday evening the 17th of January, 2020 in the Shakespeare Room at the Gilbert East Valley Regional Library. Gordon invited new members and guests to introduce themselves. He then introduced the officers of the club.

Gordon then covered several items under the President's Moment including – the recent Board of Directors meeting of January 14th, Volunteer opportunities, Badges, Clothing, Observing awards, and the EVAC website and its links. Under the website he described the three lists that members can subscribe to including EVAC-Announce, EVAC-Outreach, and AZ-Observing. On the calendar he pointed out that two meeting dates deviate from the third Friday of the month – Friday May 22, and Friday October 23, both on the fourth Friday of the month.

The Treasurer, Brooks Schofield, gave his report covering last year's finances and the budget for this year.

Claude Haynes gave his report on GRCO, the Gilbert Rotary Centennial Observatory. He showed a picture of the recipient of the 150,000th visitor with his certificate. GRCO is open every Friday and Saturday evening from sunset until 9:30 p.m. weather permitting. If GRCO will not open, it will be posted on the GRCO Facebook page. A daytime event will occur on February 22 from 9:00 a.m. until 2:00 p.m. It is the Gilbert Outdoors and Expo. Claude also reported on maintenance of the facility performed by Eagle Scouts from Cave Creek.

A card for Lynn Young who has been recently released back home from the hospital was available on the back table for any wishing to sign. An outreach update was provided, and Don Wrigley invited interested parties to help

him with the portable planetarium which he takes to outreach events on Thursdays.

After the refreshment break, Vice President Tom Mozden introduced the evening's speaker, Christopher Groppi. His talk was about Future Telescope Balloon Missions which will be flown from and around Antarctica. He first discussed the challenges of observing star formation which happens within cold clouds of gas and dust. The dust prevents visible light from escaping the clouds, so observations must be done in the sub-millimeter wavelength portion of the electromagnetic spectrum. He then discussed some of the challenges including the lack of transparency of earth's atmosphere, the cost of observing from space and the lack of "off-the-shelf" hardware for this portion of the spectrum, to name a few. The specific programs discussed were:

1. BLAST, Balloon born Large Aperture Submillimeter Telescope, recently flown but aborted early.
2. GUSTO, Galactic/extragalactic Ultra long duration Spectroscopic Terahertz Observatory to fly in 2021. GUSTO will measure far infrared spectral lines of carbon, nitrogen and oxygen from the gas in the Milky Way and the LMC to determine the structure of these clouds.
3. TIM – Terahertz Intensity Mapper to fly in 2022, will measure the properties of galaxies in the early universe.
4. ASTHROS – Astrophysics Stratospheric Telescope for High spectral Resolution Observations at Submillimeter wavelengths, to fly in 2023, and will measure various spectral lines of nitrogen to determine the properties of ionized gas in the Milky Way galaxy.

The meeting was adjourned in time to put the chairs away and vacate the building by 10:00 p.m. Following the meeting, some went to the Union Tap and Grill for continuing astronomy discussions.

FIRST QUARTER MOON ON FEBRUARY 1 AT 20:42

FULL MOON ON FEBRUARY 9 AT 02:33

LAST QUARTER MOON ON FEBRUARY 15 AT 17:17

NEW MOON ON FEBRUARY 23 AT 10:32

The Backard Astronomer

by Bill Dellinges (February 2020)

Orion King of the Constellations

Prologue: San Francisco, summer 1955. A young stargazer sets up his new 4" reflector in front of his house at 4:00 a.m. His quarry is a noted nebula he read about in a little book called the Golden Guide to the Stars. Waiting to view the nebula in the winter sky was unacceptable.

Orion the Hunter is the most majestic of the 88 official constellations (IMHO). Allow me to present my case in making this bold statement.

Orion boasts two zero magnitude stars and five second magnitude stars, more than any other constellation. Moreover, the stars form a conspicuous stick figure of a man; the stars Betelgeuse and Bellatrix mark his shoulders and Saiph and Rigel denote his feet or knees. Then there's the famous three stars forming his Belt – Alnitak, Alnilam and Mintaka (left to right). Those stars alone are enough to draw the attention of even celestial neophytes - you won't find three second magnitude stars in a straight line and that close to one another anywhere else in the night sky. As an aid to learning your way around the night sky, the Belt stars conveniently point southeast to Sirius in Canis Major and northwest to Aldebaran in Taurus. But wait, there's more! Hanging from the Belt are three faint stars forming Orion's Sword, the middle one looking a tad fuzzy. Even binoculars reveal the three stars are actually complexes of star clusters and nebulae – hydrogen gas creating new stars. The middle one is the exquisite Orion Nebula, considered to be the best example of an emission nebula in the northern skies. Few sights in the heavens are more stunning than a view of the entire Sword in 16x70 binoculars.

Perhaps no other constellation displays so clearly the difference in stars' surface temperatures as the comparison in color between Betelgeuse and Rigel (425 and 700 light years distant respectively). The former shows a red or orange tint indicating a relatively cool surface for a star of about 6,000 F. It has cooled off a bit having expanded into a red supergiant, big enough to fill the orbit of Mars if it replaced our Sun. Betelgeuse is expected to explode as

a supernova in a few million years. Rigel is a young blue-white supergiant 70 times the Sun's diameter with a surface temperature of 21,000 F., a real blow torch. For comparison the Sun's surface temperature is about 10,000 F. Betelgeuse and Rigel are both prodigal producers of energy, with luminosities of 55,000 and 66,000 times that of the Sun (respectively). This comes with a price however, as these massive stars have short lifetimes measured in millions of years rather than billions of years, as is the case of the Sun (age 4.6 billion years and still ticking). The less massive a star, the longer it lives - you might say smaller stars get better "gas mileage."

Orion is also a wonderland of deep sky objects. In addition to the Orion Nebula (M-42) try distinguishing M-43, another emission nebula just touching M-42 on its north side. Above M-42/43 you run into the top "third star" in the Sword which turns out to be not a star but NGC 1977, a combination nebula and star cluster. M-78 in eastern Orion is the only reflection nebula in the Messier catalog. By happenstance, M-78 and Mintaka, the western most Belt star, both reside along the celestial equator. So, to find M-78, simply move your telescope about four degrees east of Mintaka.

Double stars abound in Orion. Most notable is the Trapezium, the tight knot of four stars at the heart the Orion Nebula. The freshly minted hot stars' ultraviolet radiation causes the hydrogen gas to fluoresce. In the Belt you'll find Alnitak and Mintaka are double stars. Below Alnitak, Sigma Orionis is a gorgeous quadruple star looking like Jupiter and three of its moons. Iota Orionis below M-42 is a nice triple. Blazing Rigel has a faint 6.8 magnitude companion 9.4" away to its southwest that is challenging to resolve. There are more interesting sights to be had in Orion and I leave those for you to discover. I rest my case.

Epilogue: Every winter I look forward to the rising of my old friend Orion and think back to that summer morning long ago when its photons first struck my eyes.

The Peppercorn Model

by Don Wrigley

One of the challenges we amateur astronomers face when doing outreach programs for the public, is trying to convey the vastness of space in a way that is comprehensible to the average person. The easiest way to do this, of course, is by using a model that people can relate to. My favorite is the peppercorn model, which I got out of an old astronomy textbook from 1939 (it was old when I got it!). In this scale model, one yard will equal one million miles.

Imagine the Sun as a large beach ball, some 30 inches in diameter, sitting on the goal line of a football field. The nearest planet to it, Mercury would be the size of a peppercorn, sitting out on the 37 yard line. The next planet out from the Sun, Venus, would be a pea, about 1/4 inch in diameter, lying on the 67 yard line. The Earth, being the third planet from the Sun, would be a similar sized pea, only very slightly larger, sitting on the 93 yard line. Our moon would be a small peppercorn, placed about 8 inches from our pea-sized Earth. If you were sitting up in the stands, looking down at this model, the only object you would be able to see with your naked eye would be the Sun!

In order to show the next planet, Mars, we would have to leave the confines of the playing field and place a small pea 141 yards from the goal line. We may have to extend the end zone a bit to accomplish this task! The asteroids would be represented by thousands of tiny grains of sand sprinkled between the orbits of Mars and Jupiter at an average distance of 260 yards, with a few stray grains here or there, some of which even cross the Earth's orbit. Remember that the total mass of these tiny grains would not even make up the size of a small peppercorn in our model, with only a few of the grains visible to the eye. The rest would be microscopic specks spread out over a very large area - not at all like the "asteroid fields" we often see portrayed in the movies.

Next, we will represent Jupiter as an orange about 3 inches in diameter. We place it well outside of our stadium, at a distance of 440 yards, or 1/4 mile. The ringed planet Saturn is next, as a smaller orange set at a distance of 1/2

mile. Uranus is a one inch diameter plum located one mile from the goal line, while Neptune is another plum placed 1 1/2 miles from our "Sun". Pluto, though not officially still a planet, is included as a peppercorn (or a very small pea) sitting about 2 miles from our beach ball, although its elliptical orbit sometimes brings it closer to the Sun than Neptune.

We can see from this model that our solar system is mostly empty space and that the relative distances between the planets is vast indeed. But this is only the beginning. Let us continue our model on the same scale, and use it to describe the distances to the rest of the stars in our galaxy.

Let's start with Alpha Centari, the nearest star we see with the naked eye, which lies at a distance of 4.7 light years. It is similar in size to our sun, so in our model it becomes another beach ball located over 15,000 miles away. That's more than half the distance around the world! The nearest star visible to northern latitudes, and the brightest star in the heavens, is Sirius, which is 8.6 light years away. Sirius is slightly larger than our Sun, so in our model it will be a somewhat larger beach ball at a distance of over 28,000 miles!

If we continue to describe our galaxy in this manner, the other stars become various sized beach balls, basketballs, tennis balls and even some weather balloons, all separated by distances similar to the distance between the sun and the nearby stars. The center of our galaxy is some 30,000 light years away, which translates to about 100 million miles in our model. This is roughly the distance from the Earth to the Sun. To fit our entire galaxy into this model, imagine a flattened disc arranged in a spiral shape, just about the size of the orbit of Mars, containing hundreds of billions of beach balls, basketballs, tennis balls, etc., all thousands of miles from one another. That is what our galaxy, and others, is like; with so much empty space between stars that one galaxy could pass through another without some much as a single collision between stars.

February EVAC Events

by Ken Milward

EVAC Outreach to the rescue. I received a request from a group of second and third graders who had their star party cancelled. McDowell Mountain Park is a bit out of our region, but when they offered hot dogs and some mores what could I say. This is scheduled for January 31 and may be already concluded by the time this news letter is published.

I did not expect many club members to make the 100 mile trek out to Tonto National Monument for their Dark Sky Certification celebration. 85 visitors attended the event. The Park Service provided a dinner for those of us that did make it. I am starting to see a trend here. There have been a couple of star parties where they feed us pizza. It has been nice to feel appreciated for our efforts and I wish to thank those reading this news letter that have provided us with the meals.

I have requested and should have information brochures on the MMT Mount Hopkins Telescope tour to hand out to individuals attending the tour this April. This same brochure can be found on line on the MMT site. The tour bus once again departs early in the morning and waits for no one. Some of us are planning on spending the night before in south Tucson or Green Valley to avoid the morning traffic and the long trip down there.

More tours on the horizon. I will discuss some options at this coming meeting. Still looking for some suggestions on what you might want to do in the future .

For those of you that use the Picket Post trailhead for your dark sky viewing site, the Tonto National Forest office in Globe Arizona oversees the site. For current information or suggestions call 520-866-5111. The Pinal County Sheriffs office covers the site located in Florence Arizona 520 866-5111 and of course call 911 in any emergency. Currently, there is no host at the trail site. Be sure to pick up after yourselves. During viewing hours keep your headlights off and keep your dust down. We want to make sure that we keep this site available to us. Closed to overnight camping they keep the gate open for our use.

February Star Parties:

- Feb 5 Altadena Middle School
- Feb 6 C. O. Green field Elementary
- Feb 11 Islands Elementary
- Feb 13 Kyrene Traditional Academy
- Feb 19 Chandler Gilbert Community College
- Feb 20 Carson Jr High
- Feb 27 Conradian Elementary

Ken Milward

Outreach Event Coordinator (events@evaonline.org)

To contact me for event questions or to volunteer to support outreach events, please use the "Contact Events Coordinator" link at the bottom of the main page on our web site located at evaonline.org.

Used Scope Auction at Feb. 21 Meeting

- Meade 10 inch LX200 Classic SCT OTA
- Meade LX D55 6 inch Refractor
- Celestron 9.25 inch Star Bright XLT
- Celestron 8 inch Reflector on EQ mount
- Celestron 114mm NextScope
- Eyepieces and Accessories

- Silent Auction During Break**
- Arrive early to preview items**
- Bring cash or check – no credit card**
- Great values on used equipment**
- Check EVAC Facebook page for more info**



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-Observing. 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 is Back

We will be taking orders one last time at the February meeting for hats, sweatshirts with hoods, and shirts with pockets. We will have sizing and color samples at the meeting. Please come prepared to prepay and if we have a minimum order quantity of 25, the order will be placed after the meeting.

Sizes, Colors, and pricing:

- The shirt sizes S – XL are \$15, with XXL being \$18
- Colors are Silver-Gray, Light Blue, Royal Blue
- The sweatshirts sizes S – XL are \$25, with XXL being \$30
- Colors are Light Gray, Dark Gray, Purplish-Blue, and Turquoise
- One size hat \$12 which can be vented or non-vented
- Current color is black with white lettering
- Potentially we may be able to do a Gray hat with black lettering

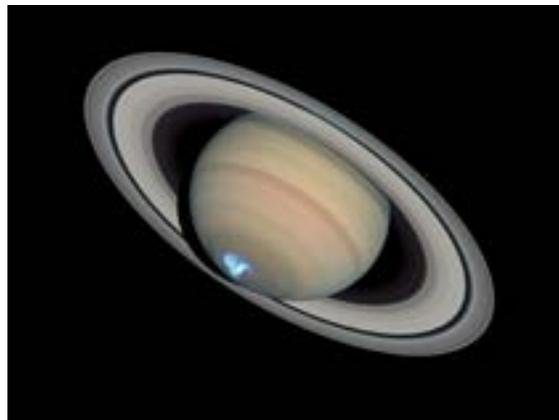
If you ordered items at the January meeting, they will be ready for pick up at the February meeting. Contact Tom Mozdzen at vp@evaonline.org if you have questions.



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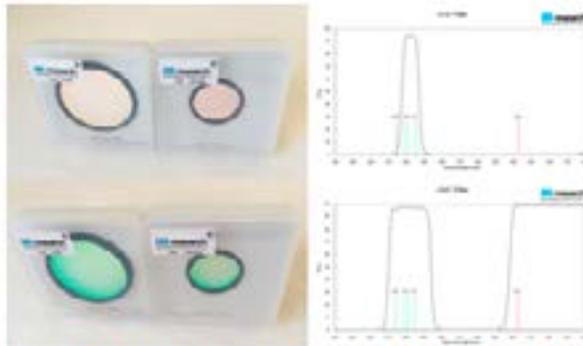
Apache-Sitgreaves Observatory

Overgaard, Arizona

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Observing
Telescope
in
Arizona



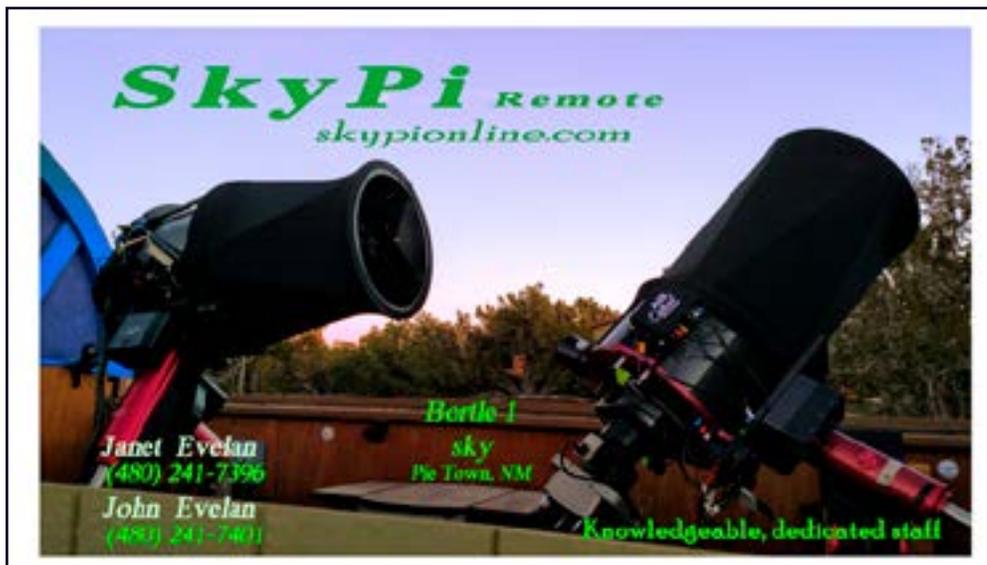
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[SkyPi Remote Observatory](#)



FOR SALE: Unitron 4-inch Equatorial Refractor Model 152

Classic Unitron from 1965 complete with:

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- original wood boxes for OTA, mount, tripod, eyepieces and other original accessories.

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Upcoming Meetings

February 21

March 20

April 17

May 22

June 19

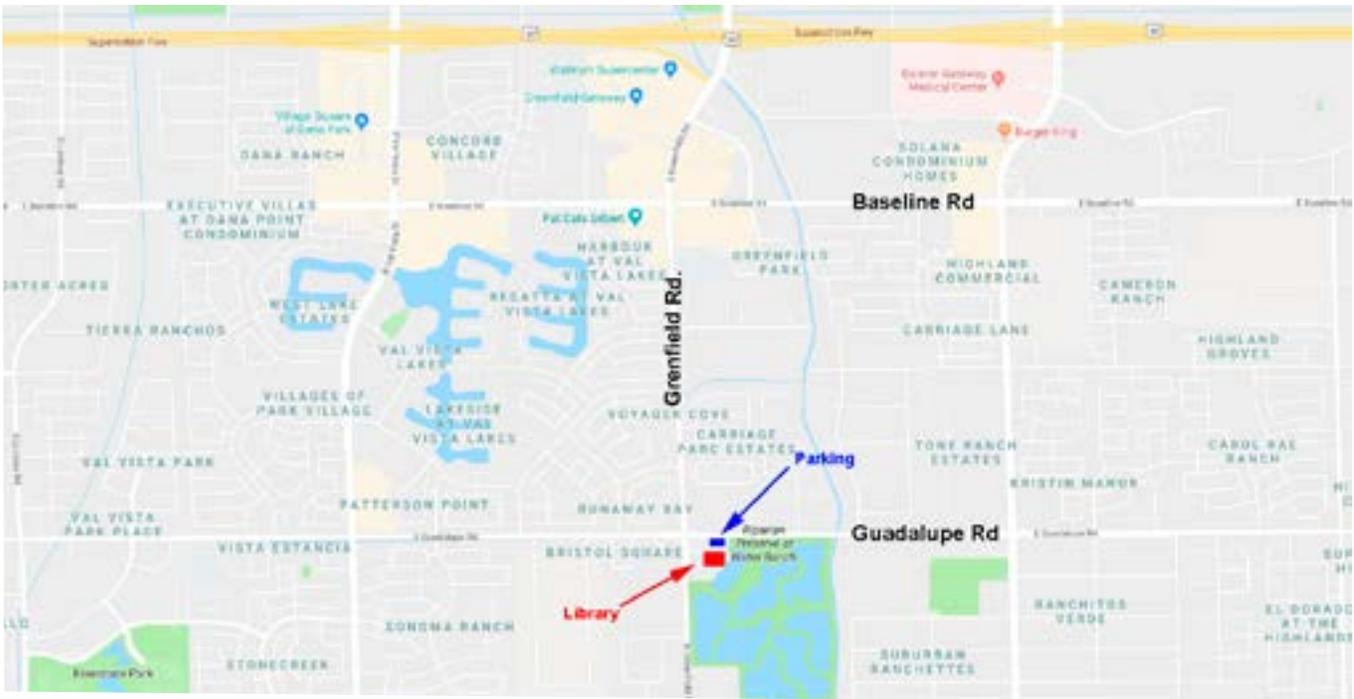
July 17

August 21

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



FEBRUARY 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

February 5 - Altadena Middle School

February 6 - C.O. Greenfield

February 11 - Islands Elementary

February 13 - Kyrene Traditional Academy

February 14 - Public Star Party

February 15 - EVAC Star Party

February 19 - Chandler Gilbert Comm College

February 20 - Carson Jr, High

February 21 - EVAC Monthly Meeting

February 22 - Outdoor Expo GRCO Solar

Observing / EVAC Star Party

February 27 - Conradian Elementary

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 - Altadena Middle School

March 13 - Public Star Party

March 14 - EVAC Star Party

March 20 - EVAC Monthly Meeting

March 21 - 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 _____

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@evaonline.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.evaonline.org

East Valley Astronomy Club
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President: Gordon Rosner

Vice President: Tom Mozdzen

Secretary: Wayne Thomas

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Events Coordinator: Ken Milward

Property Director: David Hatch

Refreshments: Jan Barstad

Observing Program Coordinator: Wayne Thomas

AL Representative: Rob Baldwin

Newsletter Editor: Marty Pieczonka

Webmaster: Marty Pieczonka

SkyWatch Coordinator: Claude Haynes

Observatory Manager: Claude Haynes