

# THE OBSERVER



All-Arizona Star Party - October 2018

## UPCOMING EVENTS:

- EVAC Public Star Party - October 11*
- EVAC Meeting - October 18*
- EVAC Star Party - October 19*
- All Arizona Star Party - October 25-26*
- Check out all of the upcoming club events in the Calendars on page 11.*

## INSIDE THIS ISSUE:

<i>From the Desk of the President</i>	1
<i>September Meeting Minutes</i>	2
<i>Constellation History and Trivia</i>	3
<i>Announcements</i>	4
<i>All Arizona Star Party</i>	5
<i>October EVAC Events</i>	6
<i>Classified Ads</i>	6
<i>Meeting Maps</i>	10
<i>Calendar</i>	11
<i>Membership Form</i>	12

## From the Desk of the President by Tom Mozdzen

Cooler weather is finally upon us, signaling the start of fall. The final three months of the year will be busy ones for EVAC:

### October:

One of our biggest events of the year, hosting the All Arizona Star Party, will be held on the nights of October 25th and 26th (Friday and Saturday nights) at the Salome Emergency Airstrip site. Friday is a potluck dinner and Saturday is a \$5 Taco dinner. See page 5 of the newsletter for more information or Contact Claude Haynes at [grco@evaonline.org](mailto:grco@evaonline.org)

Our Outreach Group begins going to schools to provide views through telescopes. Contact Ken at [events@evaonline.org](mailto:events@evaonline.org) if you can bring a telescope and help out. See the schedule here: [schedule](#).

### November:

The trip to the Mirror Lab at the University of Arizona takes place on November 8th.

Officer elections are held at our last Monthly Meeting of the year on the 15th.

### December:

We will hold our annual Christmas

# From the Desk of the President

*Continued from page 1*

Party in place of our Monthly Meeting. The date is December 19th and the location will most likely be at our usual room. Contact Janet Evelyn at [janpog48@gmail.com](mailto:janpog48@gmail.com) if you are able to provide support.

In order to hold meaningful elections in November, we need people to lead. Three board member positions are open as well as President, Vice President, and Secretary. Your Club needs you and we'd like to get a few names listed next to the open positions at the October meeting. Contact Tom Mozdzen at [president@evaconline.org](mailto:president@evaconline.org) to discuss any questions you may have.

Our modernized website needs a few more tweaks before we release it. We didn't make our self-imposed deadline of September, but we are so close that it is a vir-

## EVAC General Meeting Notes for September 2019 *by Tom Polakis*

The September meeting was attended by slightly more than 70 people. In Tom Mozdzen's absence, Vice President Rob Baldwin presided over the meeting. After guest and officer/board introductions, it was announced that EVAC will be needing to fill three offices and three Board positions in 2020. The three offices are President, Vice President, and Secretary. Please contact any of the officers if you are interested in offering your services. Rob showed a preview of the club's redesigned and greatly improved Web site, which will be deployed soon.

Gilbert Riparian Centennial Observatory manager Claude Haynes gave a status report on the observatory. Please take a look at the GRCO Facebook page, and "Like" it. The All-Arizona Star Party will be held on October 25 and 26 at the usual Airstrip site. Details are provided on the club Web site. Brooks Scofield gave a brief Treasurer's report. EVAC remains in very good financial health.

Two member presentations followed. Woody Sims showed photometry and his own spectroscopic results for the recurrent nova V3890 Sgr, which has had two previously observed outburst spaced 28 years apart. Woody is the lead author in an Astronomical Telegram

tual certainty that we will send out a "now live" notice in October. In the mean time, visit our [Facebook Page](#) which now has over 275 members. Great pictures, questions, and discussions are going on all the time. Ask a question – post a photo – give an answer – or just see what is going on.

This month Dr. Dennis Zaritsky will return to EVAC to speak about the design, current status, and planned science of the Giant Magellan Telescope, which will be located in Chile.

See you at the October meeting,

Tom Mozdzen

about this object, having done the bulk of the spectroscopy. Bob Buchheim followed with a short description of the eclipsing binary star KIC 9832227. In 2017, it was thought to be speeding up toward a predicted 2022 nova, but this was rescinded in a 2018 paper. Bob recently did his own photometric observations of the eclipsing system, and found the minimum to be 80 minutes ahead of "schedule."

Events Coordinator Ken Milward spoke about the upcoming school star party season, and the planned EVAC/SAC trip to Tucson to visit the Mirror Lab and both telescope shops. He did a raffle for those in the audience who had name badges.

After the break, the main speaker of the night was Tom Polakis. He spoke about two subjects. "Taxonomy of Galaxies" described the system used to classify all types of galaxies, using Tom's images taken in Tempe. "A Century In The Blink of an Eye" used image pairs to show changes in positions and structure of astronomical objects. Many of the earlier images in the pairs were taken at Lick Observatory at the turn of the century, while the latter images were taken at Tom's observatory in Tempe.

# The Backyard Astronomer

by Bill Dellings (October 2019)

## What You Might Not Know About the Constellations

The constellations we know today are the end result of at least 5000 years of development by our ancestors; the Sumerians, Babylonians, Egyptians and Greeks. Many changes and tweaking occurred along the way before the classical 48 constellations were summarized and published in Ptolemy's *Almagest* in 150 AD. The situation remained the same until a burst of new constellations were created between 1600 and about 1800 AD resulting from the exploration of the southern hemisphere by seafaring nations, observations from Cape Town, Africa and a number of astronomer-cartographers taking liberty to fill voids between the established classical constellations.

By the beginning of the twentieth century, constellations numbered over 100 and growing without restraints. To address this problem, the International Astronomical Union (IAU) at their first meeting in 1922 culled the herd of dubious constellations down to 88 official constellations. That was that – no new constellations were allowed. In 1603, Johann Bayer produced *Uranometria*, one of the first impressive star atlases of the time. In addition to named stars, he assigned lowercase Greek letters ( $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\epsilon$ , etc.) to each naked eye star in his constellations, including the brighter named stars and usually, but not always, in order of decreasing brightness. Star atlases also show a numbering system, known as Flamsteed numbers. John Flamsteed was the first Royal Astronomer at Greenwich Observatory whose *Atlas Coelestis* was published posthumously in 1725. However, his numbered stars were only on an earlier private version. Astronomer J.J. Lalande borrowed the idea for his 1783 French edition of *Atlas Coelestis*. The number system was widely accepted and are assigned in increasing right ascension, not brightness like the Bayer system. Most modern star atlases use both Bayer Greek letters and Flamsteed numbers. By convention the Greek letters and Flamsteed numbers are used with the Latin name of the constellation in the genitive or possessive form such as  $\alpha$  Canis Majoris for Sirius.

In 1930 the IAU also established boundary lines for the constellations. Prior to this, constellations didn't have official borders; though some atlases had shown curvy lines encircling them. The new IAU borders followed up/down or right/left lines "parallel" with

right ascension and declination lines and would utilize "steps" when necessary.

Adhering to these rules and recognizing only 12 zodiacal constellations, it's interesting to note that while the Sun spends seven days in Scorpius, it moseys along in Ophiuchus for eighteen days but is not considered a zodiacal constellation!

This concludes your crash course on constellation history. Now let's have a little fun with some constellation trivia. What is the largest and smallest constellation? Of the total available 41,253 square degrees of the night sky available, Hydra, the Water Snake at 1,303 square degrees (3.158% of the sky) takes first prize. The smallest is Crux checking in at 68.45 square degrees (0.166%). The next five in decreasing size after Hydra are Virgo, Ursa Major, Cetus, Hercules and Eridanus. To help remember them in order, consider the mnemonic Hate Viewing Under Clouds Hiding Earth.

What two constellations' spellings don't change when used in the genitive form? Camelopardalis and Puppis. By the way, the former is not a camel but a giraffe!

Libra is the only inanimate object of the 12 zodiacal constellations. Virgo is the only constellation to use all 24 Greek letters. Taurus has the most Flamsteed numbers (140). Sagittarius contains the most Messier objects (15). Serpens is the only constellation split into two parts (Caput and Cauda – head and tail). Nine constellations are represented by birds. Mensa (The Table Mountain) is the only constellation named after a geological feature. This was one of fourteen new constellations created by French astronomer Nicolas Louis de Lacaille while observing from Cape Town, Africa from 1751-1752 below Table Mountain. He also dismantled the large classical constellation Argo Navis into three smaller ones – Carina (The Keel), Puppis (The Stern) and Vela (The Sails).

After this fusillade of star lore, you might want to clear your head tonight by going outside and looking up at the friendly stars. They are there for you, just like they were for the Sumerians 5000 years ago. The show is free and there is no test.

## 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](mailto:grco@evaconline.org)***

# All AZ Star Party

## October 25 – 26 Hovatter Road Site

Friday – 5pm Potluck Dinner

Saturday – 4 pm Soda Get Together

4:30 pm Raffle Drawing

\$1 each / 6 for \$5

5 pm Taco Dinner \$5.00

9 pm Coffee & Snacks

(each night)

Toilets provided – great camping site

Detailed information under Member Star Parties at [www.evaconline.org/sp.html](http://www.evaconline.org/sp.html)



**FIRST QUARTER MOON ON OCTOBER 5 AT 12:47**

**FULL MOON ON OCTOBER 13 AT 17:08**

**LAST QUARTER MOON ON OCTOBER 22 AT 08:39**

**NEW MOON ON OCTOBER 27 AT 23:38**



## October EVAC Events

The 2019 - 2020 STAR PARTIES season is upon us these are the parties scheduled for October.

10/21/19 Chandler- Gilbert Community College 2626 E. Pecos Rd, Chandler

10/29/19 Shepherd Junior High 1407 N. Alta Mesa Dr. Mesa

I would like to see the regulars and anyone that has interest in participating in these events come out. You don't have to have a telescope to help out and it is a great way to get started. Our VOLUNTEERS will help you with your scope and let you observe through theirs. Don't be bashful come on out and get to know some of your fellow club members and astronomers.

The Mirror Lab tour, scheduled for Friday November 8, has only a couple of openings left. I would suggest that you contact me and mail me a check made out to EVAC if you wish to attend. At the very latest this will be closed at the conclusion of our meeting and it could easily be full before that. Closed toe shoes are required. The tour will conclude at 12:30 pm most of us will be ready for lunch by then. I have made a reservation at the Bear Down Kitchen for up to 30 of us. Located directly atop of the stadium on the 6th floor a elevator ride will get you there. The view is grand and it appears that the food is good. This is

pay for your own \$12.50 for a buffet including your drinks and dessert. If you wish to eat somewhere else that is fine however this is a way that several of us could sit down together and have a meal. I would suggest visiting Stellar Vision after lunch and then Starizona on your way out of town. Starizona will be having their monthly star party that evening and demonstrating some of their equipment. Neither of these stops are mandatory, but when will you have a chance to get back down to Tucson again? Both of these stores have supported my raffles by donating prizes. Please drop in and let them know that we appreciate their contributions.

Be sure to wear your name badges to our next meeting, I still have plenty to raffle off in the future. If you do not have a name badge order one from Brooks and get in on the raffle. Please be sure and get your ticket before the meeting begins.

I have another tour in the works and will be asking for a show of hands that would like to attend. Lets get some exercise and raise those hands and go some where interesting.

Ken Milward  
Outreach and Event Coordinator  
East Valley Astronomy Club

## Classified Ads

EVAC is offering free to anyone with a good home:

{3} 4 inch reflector telescope optical tubes, with no mounts. {1} 4 inch reflector telescope on tripod mount.



## Classified Ads

Also for sale: a 10 inch orion dobsonian tube, with primary and secondary mirrors, but this has no focuser.

Selling this dob for the value of the mirrors. All are in unknown condition and offered as is, you be the judge.



David C Hatch  
480-371-7934  
EVAC Properties Director

**Webcam imaging made easy!**

**Time lapse**

**Planetary  
& lunar  
imaging**



**Motion  
detection**

**Meteor capture**

**Free trial!**

**[www.AZcendant.com](http://www.AZcendant.com)**



**SUPPORT  
YOUR  
LOCAL  
TELESCOPE  
DEALER**

5757 N. Oracle Road Tucson, AZ 85704 520-292-5010  
www.starizona.com

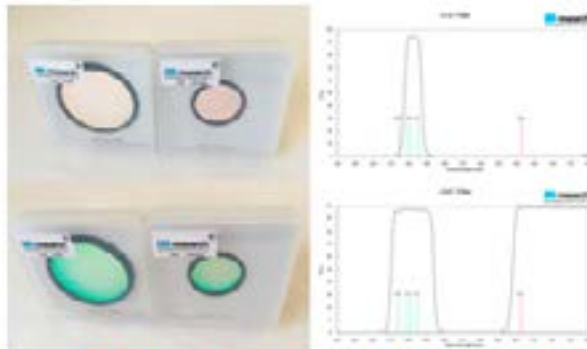
# Apache-Sitgreaves Observatory

Overgaard, Arizona

Largest Public  
Observing  
Telescope  
in  
Arizona



Critical products for visual observing, too!



A-S Research Nebula Filters: See More Nebulosity!

<http://www.fotaso.org>



## Classified Ads



**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**

**IC 405**

**Insight Observatory  
16" ATEO 1 Telescope**

[SkyPi Remote Observatory](#)



For sale Meade LXD75 8-inch Telescope with accessories - \$1250: [LXD75](#)

Bill Musik: [bmusik@cox.net](mailto:bmusik@cox.net)

For sale: a classic LX200 8" telescope with field tripod.  
\$975.00 cash and carry. No eye pieces with scope.



Frank Pino. [f.pino@mchsi](mailto:f.pino@mchsi) 480-882-3485

# Upcoming Meetings

October 18

November 15

December 19

January 17

February 21

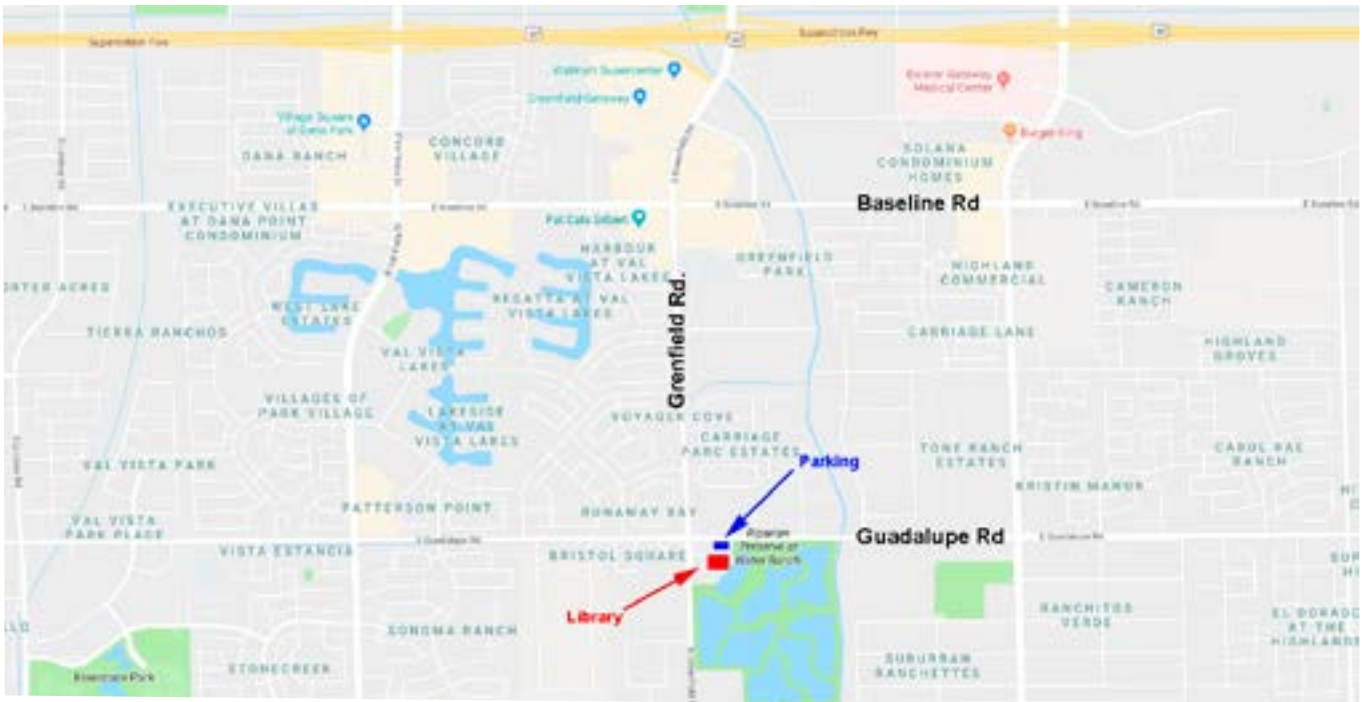
March 20

April 17

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



## OCTOBER 2019

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>	<b>19</b>
20	<b>21</b>	22	23	<b>24</b>	<b>25</b>	<b>26</b>
27	28	29	30	31		

**October 11** - Public Star Party

**October 18** - EVAC Monthly Meeting

**October 19** - EVAC Star Party

**October 21** - Chandler-Gilbert College

**October 24** - Houston Elementary

**October 25 & 26** - All Arizona Star Party

**October 29** - Shepherd Junior High

## NOVEMBER 2019

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

**November 5** - Patterson Elementary

**November 8** - Public Star Party

**November 15** - EVAC Monthly Meeting

**November 16** - EVAC Star Party

**November 21** - Poston Junior High

**November 16** - Rover Elementary

**November 23** - EVAC Star Party

## East Valley Astronomy Club -- 2019 Membership Form

Please complete this form and return it to the club Treasurer at the next meeting or mail it to EVAC, PO Box 2202, Mesa, Az, 85214-2202. Please include a check or money order made payable to EVAC for the appropriate amount.

**IMPORTANT: All memberships expire on December 31 of each year.**

Select one of the following:	
<input type="checkbox"/> New Member	<input type="checkbox"/> Renewal
<input type="checkbox"/> Change of Address	
<b>New Member Dues</b> (dues are prorated, select according to the month you are joining the club):	
<input type="checkbox"/> <b>\$30.00 Individual</b> January through March	<input type="checkbox"/> <b>\$22.50 Individual</b> April through June
<input type="checkbox"/> <b>\$35.00 Family</b> January through March	<input type="checkbox"/> <b>\$26.25 Family</b> April through June
<input type="checkbox"/> <b>\$15.00 Individual</b> July through September	<input type="checkbox"/> <b>\$37.50 Individual</b> October through December
<input type="checkbox"/> <b>\$17.50 Family</b> July through September	<input type="checkbox"/> <b>\$43.75 Family</b> October through December
<i>Includes dues for the following year</i>	

<b>Renewal</b> (current members only):
<input type="checkbox"/> <b>\$30.00 Individual</b> <input type="checkbox"/> <b>\$35.00 Family</b>

<b>Name Badges:</b>
<input type="checkbox"/> <b>\$10.00</b> Each (including postage)    Quantity: _____
Name to imprint: _____

**Total amount enclosed:**

*Please make check or money order payable to EVAC*

Payment was remitted separately using PayPal     Payment was remitted separately using my financial institution's online bill payment feature

Name:       Phone:

Address:       Email:

City, State, Zip:

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.

<input type="checkbox"/> General Observing <input type="checkbox"/> Cosmology <input type="checkbox"/> Lunar Observing <input type="checkbox"/> Telescope Making <input type="checkbox"/> Planetary Observing <input type="checkbox"/> Astrophotography <input type="checkbox"/> Deep Sky Observing <input type="checkbox"/> Other	
---	--

Would you be interested in attending a beginner's workshop?     Yes       No

How did you discover East Valley Astronomy Club?

To join via Paypal: <a href="http://evaonline.org/join_evac.htm">http://evaonline.org/join_evac.htm</a>	Joining the club implies you agree to the liability waiver. <a href="http://evaonline.org/join-liability_release_form.htm">http://evaonline.org/join-liability_release_form.htm</a>
--	--

*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](mailto: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.*

*Material in this publication may not be reproduced in any manner without written permission from the editor. ©2005-2019*

*The East Valley Astronomy Club is a 501(c)(3) nonprofit charitable organization.*

[www.evaonline.org](http://www.evaonline.org)

East Valley Astronomy Club  
PO Box 2202  
Mesa, Az. 85214-2202

*President: Tom Mozdzen*

*Vice President: Rob Baldwin*

*Secretary: Tom Polakis*

*Treasurer: Brooks Scofield*

*Board of Directors: Henry DeJonge, Claude Haynes, David Hatch, Gordon Rosner & Derek Youngson*

*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*