

# THE OBSERVER



Twin Galaxies in Virgo - APOD February 1, 2019  
 Image Credit & Copyright: CHART32 Team, Johannes Schedler

## From the Desk of the President by Tom Mozdzen

The Messier Marathon was held this past weekend at the Hovatter Airstrip and enjoyed a healthy turn out on Saturday despite the wind. Kudos to those who stayed for three days, because those who were there on Thursday remarked that it was a fabulous night for observing. I'll have to remember that for next year, throw the dice at least three times. A memorial was held for Steve Coe, long time Phoenix area author and amateur astronomer, at the nearby Antenna's observing site, which Steve had discovered and which became a popular site for many. Thirty-five people were present at the memorial where memories of Steve were

shared followed by the scattering of his ashes.

The International Science and Engineering Fair is being held in Phoenix in May and is still in need of hundreds of Judges and Volunteers. I have served as a judge several times in the past and although it is a mentally stressful task, it has been quite a rewarding and uplifting experience to see the projects and skills of so many talented young people. The Fair prefers their Judges to have at least a BS degree and six years of relevant experience in that field or a related field (usually not a problem for most EVAC members). If you'd like

## UPCOMING EVENTS:

- EVAC Public Star Party - April 12*
  - EVAC Star Party - April 6*
  - EVAC Meeting - April 19*
  - EVAC Star Party - April 27*
- Check out all of the upcoming club events in the Calendars on page 10.*

## INSIDE THIS ISSUE:

<i>From the Desk of the President</i>	1
<i>March Meeting Minutes</i>	2
<i>The Lion's Treasures</i>	3
<i>2019 All Arizona Messier Marathon</i>	4
<i>Announcements</i>	5
<i>Classified Ads</i>	6
<i>Meeting Maps</i>	9
<i>Calendar</i>	10
<i>Membership Form</i>	11

# From the Desk of the President

*Continued from page 1*

to volunteer in any capacity, please visit this site to sign up: [Judge](#) or [General Volunteer](#).

We ordered quite a few EVAC logoed shirts and hats at the March meeting and will take one more round of orders at the April meeting. The March orders have arrived and will be available to pick up at the April Meeting. We will take one more round of orders at the April meeting. We will order a few extra items to have on hand for new members or others who missed the April meeting. It could then be another 6-12 months before we stock the items again, because the minimum order is 20 items. The last time we made EVAC clothing available was about six years ago. We hope not to go that long again, but if you would like an item, please put your order in at the April meeting.

## EVAC General Meeting Notes for March 2019

*by Tom Mozdzen*

Tom Mozdzen opened the meeting by introducing Officers and Board members and then greeted visitors. Tom took a show-of-hands-survey of those present to ask the question: Do we get the same members at every meeting? About half of the members in attendance indicated they were at the January meeting, and half indicated they were at the February meeting, but nearly everyone raised their hand when asked if they were at either of the first two meetings this year, indicating that we do get a good cross-section of the membership at our meetings, as there were about 60-70 people in attendance.

Our Treasurer Brooks Scofield reminded members that he had several name tags available for pickup and reminded those who haven't paid their 2019 dues, to please do so. We try to only spend annually what we take in from membership dues, which mostly go to provide refreshments at the meeting as well as a modest speaker stipend.

Tom mentioned that GRCO is always looking for more people to volunteer Fridays or Saturdays to help with the crowds. It is amazing how many visitors we get night after night to look through the telescope. Marty Pieczonka's daughter-in-law refreshed the GRCO webpage and it looks very nice! You can view it from the EVAC webpage, or click [here](#).

Several announcements were made: Fountain Hills Dark Sky Celebration on March 30th; the Messier Marathon also

Reminder that ASU's School of Earth and Space Exploration is having an open house (free) on Friday, April 5th from 6:30 to 9:30 pm at the Interdisciplinary Science and Technology Building IV (ISTB4) on the ASU Tempe campus featuring Lectures, Planetarium shows, Telescope viewing, and exhibits by Students describing the research they are working on. Please visit [this web page](#) for more details.

The featured speaker for the April meeting will be Dr Larry Wasserman (Lowell Observatory) - Characterizing Ultima Thule during NASA's New Horizon Mission.

See you at the April meeting

Tom Mozdzen

on March 30th; and ASU's [Open House](#) April 5th 6:30pm. David Douglass gave a member presentation titled "Image Scale and Aperture." He also discussed EVAC logoed clothing and said he would be taking orders during the break for items available for pickup at the April Meeting.

Our featured speaker was Scott Dickenshied, a Senior Scientific Software Engineer at Arizona State University's Mars Space Flight Facility. Scott's presentation focused on JMARS, and how it is used heavily by NASA mission planners and scientists to command instruments currently orbiting Mars, the Moon, and various asteroids. He described how researchers use JMARS to view data collected by NASA for many bodies in the solar system. He had a live interactive session and was able to display impressive NASA data that is available to both researchers and the general public (us). The free tool can be downloaded [here](#). One may use the tool either as a guest or a registered user. After the Q&A session, Scott continued to answer questions one-on-one with members after the talk well past the time when all chairs and tables were put away.

After the meeting about eight of us joined Scott at the Union Grill and Tap at the N.W corner of Higley and Baseline for continued conversation.

Our speaker for April will be Dr. Larry Wasserman from Lowell Observatory, whose talk is titled, "Characterizing Ultima Thule during NASA's New Horizon Mission."

# The Backyard Astronomer

by Bill Dellenges (April 2019)

## The Lion's Treasures

The spring's night sky is dominated by two formidable creatures, a bear in the north and a lion high on the meridian. Let's put the bruin on the back burner this month and focus on the cat. Leo the Lion pretty much defines the spring sky. Between the setting winter constellations and rising summer sky in the east, the mighty lion has no competing star formations to contest its domain. Leo is a simple constellation made up of two groups of stars. Its western end is sometimes referred to as the asterism Sickle or Backwards Question Mark. Regulus, near the bottom of the asterism, is the constellation's brightest star. The group represents the heart (Regulus), chest and mane of the lion. To the east, a three-star right triangle serves as the beast's hind quarters and tail.

As Leo doesn't lie in the band of the Milky Way, we have a clear view into deep space affording us the opportunity to observe many distant galaxies in the cosmic seas. Let's take the plunge and check out a few. All observations described here are through an 11" SCT telescope. Southwest of Epsilon Leonis, the top star in the Sickle, is NGC 2903. At 165x, the galaxy is large, faint, elongated and the bright nucleus appears slightly off center. This barred spiral galaxy is 24 million light years away (MLY). It's a mystery how Messier and his associates missed this one.

About eight degrees due east of Regulus we find a tight cluster of galaxies tucked under the lion's belly. Both M95 and M96 fit in the 11" 0.9 degree field. M96 appears slightly brighter than M95. Both are rather faint spiral galaxies. Moving the telescope one degree east, elliptical galaxy M105 pops into view. The three galaxies are about 30 MLY away and roughly the same visual magnitude (Mag~9.3). As you stare at M105, you might just pick out a very close faint galaxy to the east of it. This is NGC 3384 (Mag 9.9). But wait, there's more! Keep staring using averted vision and another really faint galaxy

floats like a ghost just below it – NGC 3389. This ghost is 50 MLY away!

Go east young man! And you shall be rewarded with another Leo Trio, M65/66/NGC 3628. The three galaxies can be gathered in the same 0.9 degree field of an 11" SCT at 90x (Nagler 31mm eyepiece). M65 and M66 seem more impressive than the M95/96/105 group. To really appreciate the beauty and weirdness of NGC 3628, see APOD's photos for April 12, 2017 (Leo trio) or May 3, 2017 (NGC 3628 closeup). Its distressed appearance is thought to be a result of gravitational interaction with M66.

Let's conclude our tour in Leo with three of Leo's best double stars. The crown jewel of double stars in Leo is Algieba (Gamma Leonis), the second brightest star in the Sickle just above Regulus. The magnitudes of the AB pair are 2.4, 3.5, separated by 4.7" (arc seconds) with a position angle of 120°, SAO 81298 (Smithsonian Astrophysical Observatory number). The 11" just splits the yellow pair at 90x. It's more pleasing at 165x.

54 Leonis: AB 4.5, 6.6, 110°, SAO 81583. Easily split at 90x. The yellow primary has a fainter companion tucked closely in at 5 o'clock position (reversed field).

90 Leonis: A fine delicate triple star. AB 6.2, 7.3, 3.5", 209°. AC 6.2, 9.8, 63.1", 234°, SAO 99673. 90x splits all three stars, better at 165x. AB was not as cleanly split as desired due to seeing.

These are some of the highlights of Leo. Before you retire, break out a pair of binoculars and take a look at the large nebulous blobs west and east of Leo. Did you notice them before? To the west is M44, the Beehive Star Cluster and to the northeast, the Coma Berenices Star Cluster (aka Mel 111). Long ago around 150 A.D. the big cat was even bigger. M44 was his nose and whiskers and Mel 111, the tuft of hair at the end of his tail.

# 2019 All Arizona Messier Marathon

by Tom Polakis

The All Arizona Messier Marathon was held on Saturday, March 30 at the Salome Emergency Airfield, 90 miles west of Phoenix. The placement of the New Moon Saturday during the last week of March meant that it would be possible to see all 110 Messier objects in a single night. Weather forecasts were also promising, showing a clear night with some wind. These prospects led to a good turnout: over 50 vehicles were present with at least as many telescopes.

Many people attend on not only the day of the marathon, but for a day or two prior as well. Reports were of an excellent Thursday, but a cloudy Friday. Before sunset on Saturday, a patch of cirrus clouds appeared ominously in the west. These would affect viewing, but during twilight, there was a window of clearing that would enable some viewers to see M74 and M77. During my tour of the field, I heard a couple positive reports of their sighting. Making things more challenging than the occasional high clouds, however, was a persistent

wind, accompanied by occasional gusts. It only let up for a couple hours around midnight, and was at it again by the time the Summer objects were available for viewing. By dawn, a handful of observers were searching for M30 below a waning crescent moon. Results have not yet been finalized, but will be available by the time of the next issue of *The Observer*.

Since the All Arizona Messier Marathon is one of the most popular star parties in the state, a memorial service for Steve Coe was held at the Hovatter Road Antennas site, 15 minutes to the west of the airfield. By the 2:00 start, 35 people had arrived at the precise site that Steve observed at so many times. His wife of 17 years, Linda Ross, brought his ashes. Each person in the circle was given a chance to say a few words about Steve, or as Steve would say, "see who could tell the biggest lie." At the end of the ceremony, Kevin Kozel planted a nice plaque that he created on a nearby hill.



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



**SUPPORT  
YOUR  
LOCAL  
TELESCOPE  
DEALER**

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

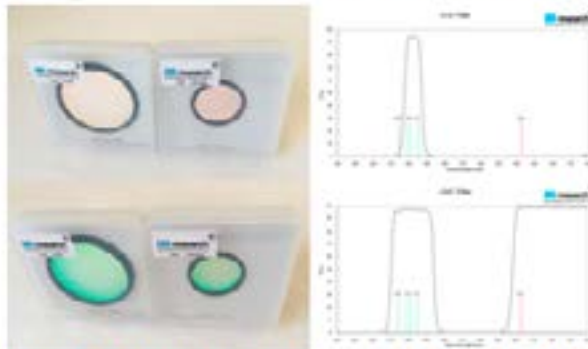
# Apache-Sitgreaves Observatory

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>

**Webcam imaging made easy!**

**Time lapse**

**Planetary  
& lunar  
imaging**



**Motion  
detection**

**Meteor capture**

**Free trial!**

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

**PHOTON**

**INSTRUMENT LTD.**

SALES REPAIR SERVICE RESTORATION

**ASTRONOMICAL TELESCOPES**

**WARREN & JUDY KUTOK**

122 E. MAIN STREET MESA, AZ. 85201

480-835-1767 800-574-2589

Note: Photon Instruments is selling its location and may have some inventory reduction deals.

## 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](#)





# Upcoming Meetings

April 19

May 17

June 21

July 19

August 16

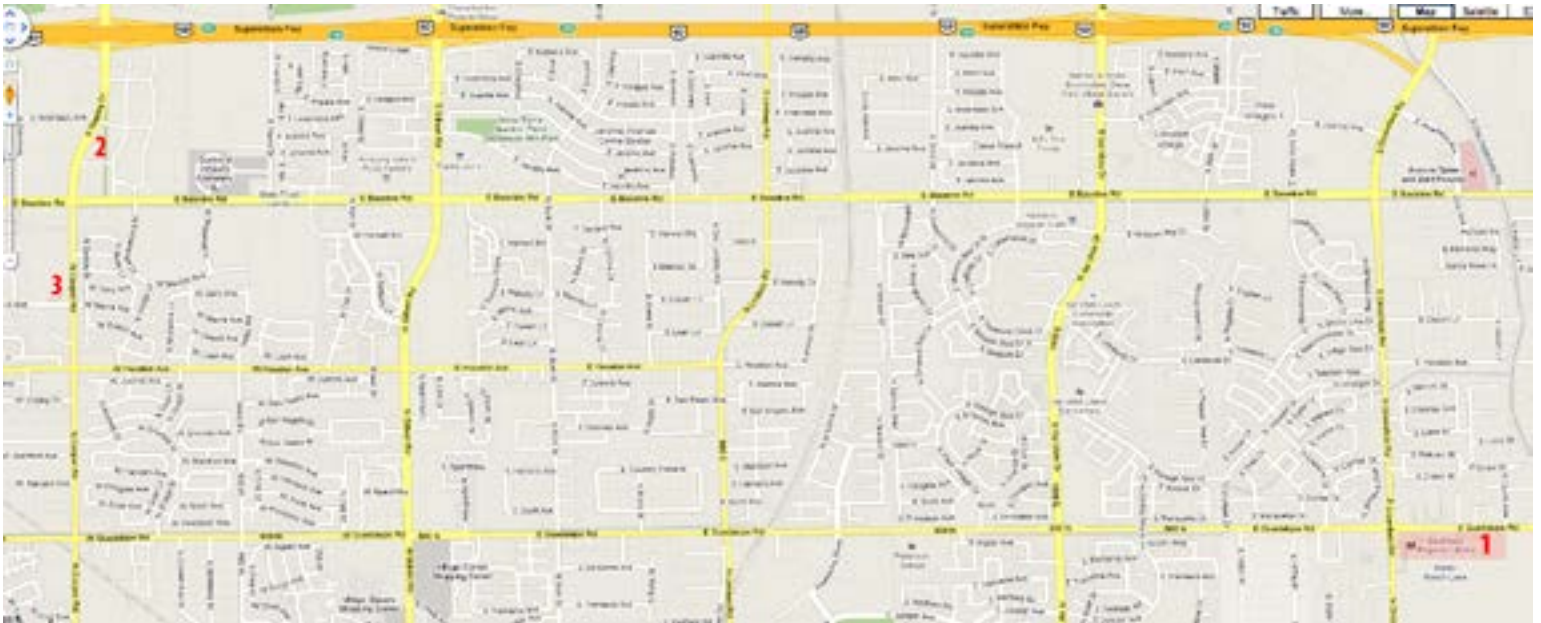
September 20

October 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!***



**1** Southeast Regional Library  
775 N. Greenfield Road  
Gilbert, Az. 85234



# APRIL 2019

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

**April 6** - Phoenix Zoo Night Camp

**April 6** - EVAC Star Party

**April 12** - Public Star Party

**April 19** - EVAC Monthly Meeting

**April 25** - Sanborn Elementary

**April 27** - EVAC Star Party

# MAY 2019

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

**May 4** - EVAC Star Party

**May 10** - Public Star Party

**May 17** - EVAC Monthly Meeting

**May 25** - 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?

**PO Box 2202  
Mesa, AZ 85214-2202  
[www.evaconline.org](http://www.evaconline.org)**

All members are required to have a liability release form (waiver) on file. Please complete one and forward to the Treasurer with your membership application or renewal.

*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)

*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: Lynn Young*

*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*

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

**NEW MOON ON APRIL 5 AT 04:50**

**FIRST QUARTER MOON ON APRIL 12 AT 15:06**

**FULL MOON ON APRIL 19 AT 07:12**

**LAST QUARTER MOON ON APRIL 26 AT 18:18**