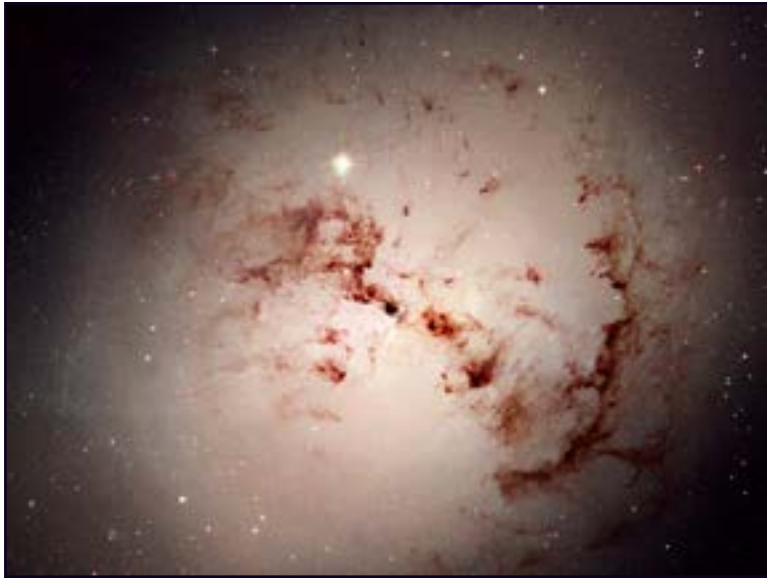


THE OBSERVER



NGC 1316 After Galaxies Collide - APOD April 6, 2009
Image Credit: NASA, ESA, Hubble Heritage Team

From the Desk of the President

by Tom Mozdzen

What is the first thing you think of when you think about the month of March? Spring Blossoms? Baseball's Spring Training? St. Pat's day? College Basketball's March Madness? An early Easter? How about: Messier Marathon! Yes, it is that time of year again. The All Arizona Messier Marathon will take place the evening of March 30th. All are invited even if you do not plan to observe the Messier objects. The Saguaro Astronomy Club is hosting the event at the Salome Emergency Airfield, which is the same location as the EVAC-hosted All Arizona Star Party. Please visit [All AZ MM](#) for further details.

During our February meeting, David Douglas displayed clothing which will sport the EVAC logo: caps, shirts, sweatshirts, and windbreakers. Since there was a great deal of interest, we placed an initial order for hats that should be available at the March meeting. If you ordered a hat or wish to buy one, please bring your payment with you. If we run out of hats, we will buy more. If you wish to obtain a shirt, please bring a means of payment since we need to prepay before we order them. The clothing should be available at the April meeting. See page 4 for more details.

UPCOMING EVENTS:

- EVAC Public Star Party - March 8*
- EVAC Star Party - March 9*
- EVAC Meeting - March 15*
- All Arizona Messier Marathon - March 30*
- Check out all of the upcoming club events in the Calendars on page 10.*

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From the Desk of the President

Continued from page 1

ASU's School of Earth and Space Exploration is having an open house 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. The Earth & Space Open House is a free activity organized by the School's graduate students. Open Houses feature informal public talks, telescope viewing, and other exciting activities. Visitors of all ages are welcome and can talk to the School's experts on topics such as astrobiology, cosmology, the Earth and planets, robotics, and space exploration. The schedule is:

- . 6:30 Doors open
- . 6:45 3-D Planetarium show
- . 7:30-9:30 Telescopes open for public viewing

- . 7:40 Keynote Lecture, Speaker TBD
- . 8:50 3-D Planetarium show
- . 9:30 Event ends

Please visit this [web page](#) for more details.

The featured speaker for the March meeting will be Scott Dickenshied, speaking on the subject of "Techniques for Capturing Images During High Speed Flybys". Scott is a Scientific Software Engineer at ASU's [Mars Space Flight Facility](#).

See you at the March meeting.

Tom Mozdzen

EVAC General Meeting Notes for February 2019

by Marty Pieczonka

Tom Mozdzen opened the meeting by introducing EVAC's Executive Officers, Board Members and Administrative Officers. After welcoming several visitors, Tom turned the meeting over to Claude Haynes who talked about the January 20th eclipse. Claude also mentioned that he is still looking for more volunteers for Friday and Saturday evenings at the observatory. Contact Claude if you can help out. Lynn Young was next on the agenda. He presented award pins for outreach at school events to the following EVAC members:

Claude Haynes	Grant Klassen
Bruce LaFrance	Sandy Milward
Ken Milward	Frank Pino
Carol Sabo	Brooks Scofield
Jim Sellers	Mary Vorlicky
John Vorlicky	Lynn Young

Lynn also gave award pins to the following GRCO

Volunteers:

Adam Baum	Rob Baldwin
Morgan Cryder	Henry DeJonge
Steve Feist	John Flynn
John Goerger	Shayne Guffey
David Hatch	Ray Heinle
John Holmquist	Michael Luciano
Nicole Park	Marty Pieczonka
Ron Risko	Gordon Rosner
Don Wrigley	Arnold Yanoff
Derek Youngson	

David Douglass, Woody Sims, and Bob Buchheim gave a short presentation on "Three views of the S(outh)* 437 Double Star System" in M45 the Pleiades. David's part of the presentation covered how the star looked in visible light though a CCD camera. Robert followed with a description of the star using an ALPY spectrograph and finally Forrest finished with a higher resolution description of the star using a LISA spectrograph.

This month we had two speakers - Sam Gordon and Adrian Sinclair. Both gentlemen are from ASU's School of Earth and Space Exploration where Sam is a NASA Earth and Space Science Fellow, and Adrian is developing FPGA (Field-Programmable Gate Array) based readouts for superconducting detectors. Adrian first gave a short talk on Modern Intensity Interferometry and this was followed by their joint presentation that gave an overview of the 2018-19 BLAST-TNG Campaign in Antarctica. The acronym stands for Next Generation Balloon-borne Large Aperture Submillimeter Telescope. The instrument is a submillimeter polarimeter designed to measure polarized thermal emissions from cosmic dust in three wavebands. These measurements provide images and maps of magnetic field structures in extragalactic objects. This mission camera is the first of its kind to fly in a space-like environment. It was designed and built right here in the ASU Cosmology Instrumentation Lab. Their presentation was a practical and engaging talk on some really unique methods to gather information from complex, distant structures.

The Backyard Astronomer

by Bill Dellinges (March 2019)

Spring is in the Air (and Night Sky)

Early March evenings find the night sky split between departing winter and arriving spring constellations, a two for one you might say. Let's start with the fleeing winter goodies. The west is dominated by two asterisms, the Winter Triangle stars of Procyon, Sirius and Betelgeuse and the Winter Hexagon of Capella, Castor/Pollux, Procyon, Sirius, Rigel, Aldebaran and back to our starting point Capella. Tracing them out is good practice in helping to familiarize yourself with some of the winter's most brilliant beacons. Don't forget to take your last look at winter gems like the Orion Nebula, Pleiades (Taurus), M-35 (Gemini), M-41 (Canis Major), the Double Cluster and Alpha Persei Association (both in Perseus). They're slowly advancing towards the western horizon and will soon take a nine - month hiatus from our evening skies.

Looking eastward into the spring skies, note halfway along a line from Pollux in Gemini to Regulus in Leo there's a nebulous patch of light in an otherwise empty part of the sky. In brighter skies it's just a ghost. In darker skies the unaided eye can just make out the stars of M-44, the Beehive Cluster, a harbinger of the spring constellations to come. M-44 is the fifth closest star cluster to us after the Ursa Major Moving Cluster, 80 light years (ly) distant, Hyades in Taurus (150 ly), Coma Berenices Cluster, aka Mel 111 (283 ly) and Pleiades (M-45, 400 ly). M-44's relative closeness is why it exhibits such a large apparent size of at least 1.5 degrees. For that reason, binoculars are recommended to view it. While in the area, why not pay a visit to Iota Cancri about 8 degrees north of M-44. It's a beautiful blue and yellow double star easily split in small telescopes (magnitude [mag] 4.1, 6.6, 30.5") (SAO 80415).

You may notice there's a dearth of bright stars in this region of sky; the reason being the Milky Way is absent here. Still, there's an interesting group of six stars, mag 3.0 and dimmer, below the Beehive Cluster that may draw your attention. They're the stars that make up the "Head" of Hydra, the Water Snake. The group covers

about five degrees and thus is a fine binocular target. I don't think they get much attention and would likely welcome visitors. The brightest and most northern member of the group is Epsilon Hydrae, a challenging triple star (SAO 117112). A little farther south from the Snake's Head is Hydra's brightest star at mag 2.0, Alphard. The name is apt, as it's from the Arabic "Solitary One." Indeed, it's one of the few light posts in this great north to south void between Procyon and Regulus. Incidentally, Hydra has the distinction of being the largest of the 88 constellations in terms of square degrees (1302.84°).

Further to the east is the prominent spring constellation Leo the Lion, one of the few star patterns that looks like what it's supposed to be. Shining at mag 1.4, Regulus is Leo's brightest star and sits only half a degree north of the ecliptic, meaning its subject to an occasional occultation by the moon. It has a wide 7th mag companion to its northwest easily seen in an 8x50 finder. Above Regulus in the Lion's "Mane" resides Algieba (Gamma Leonis), a fine close double star (4.7") resolvable in a 70mm refractor at 80x (SAO 81298). The constellation abounds in galaxies. Start with NGC 2903 west of the Mane. East of Regulus, under the Lion's belly are M95, 96 and 105. Glide further east to the beast's hind quarters and you'll find another Leo trio south of Delta Leonis (Chertan, aka Coxa): M65/66/ NGC 3628.

Rising in the northeast is Ursa Major, the Great Bear. He has awakened from his winter slumber and is on the prowl. There is no better time to observe two of his finest gems, M-81 and M-82. Both galaxies are about 12 million light years away and separated by just over 100,000 light years from what astronomers think was a close encounter, which explains the disrupted look of M-82, evident even in backyard telescopes.

Like the Great Bear, we humans have also arisen from a long winter hiatus and look forward to observing the celestial delights of spring under warmer conditions.

EVAC Hats, Shirts and Jackets

by David Douglass

At the February EVAC meeting, we gave a very short announcement about Baseball Caps, Shirts, and Jackets, all with the EVAC logo, and were asking for an indication of interest. The response was overwhelming! Unfortunately, due to extensive scheduling, we were unable to spend much time on the subject, or to set up a table to take orders and/or collect payments.

Due to large interest for the baseball caps, we decided to go ahead and order about 30 caps. There are two styles, being summer and winter. And.. one size will fit all... (hopefully). The summer cap is "vented" for breathing. The caps will run \$13 (both styles). These caps will be available for purchase and pickup at the March meeting. They will be available at the Treasurers table. If you are one of the 15 or so that "signed-up"... then your cap is reserved and will be ready for you. If you did not "sign-up", then we have purchased several additional caps in both styles, and they too will be available at the Treasurers

table before the meeting, and during the break. We can order additional caps, based upon demand.

We also had a couple "samples" for short shirts /pocket, and a "hooded" sweatshirt, which drew much interest. At the meeting in March, we should have more of the "samples", with various sizes. We will be taking "pre-paid" orders for shirts and sweatshirts at the Treasurers table. The shirts (Sm – Med – Large – X-Large) are \$14, with the 2XL size at \$16. The "hooded" sweatshirts (jackets) (Sm – Med – Large – X-Large) are \$26, and the 2XL size is \$32.

Estimated "production" time for the shirts and jackets is 7-10 days. For those that would like to have them before the All Arizona Messier Marathon, I will make them available for "pick up" at my residence, by appointment. You can contact me at 602-908-9092.

NEW MOON ON MARCH 6 AT 11:04

FIRST QUARTER MOON ON MARCH 6 AT 06:27

FULL MOON ON MARCH 20 AT 21:43

LAST QUARTER MOON ON MARCH 28 AT 00:10

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



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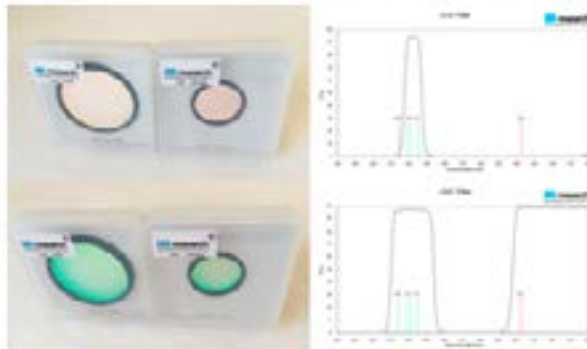
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Upcoming Meetings

March 15

April 19

May 17

June 21

July 19

August 16

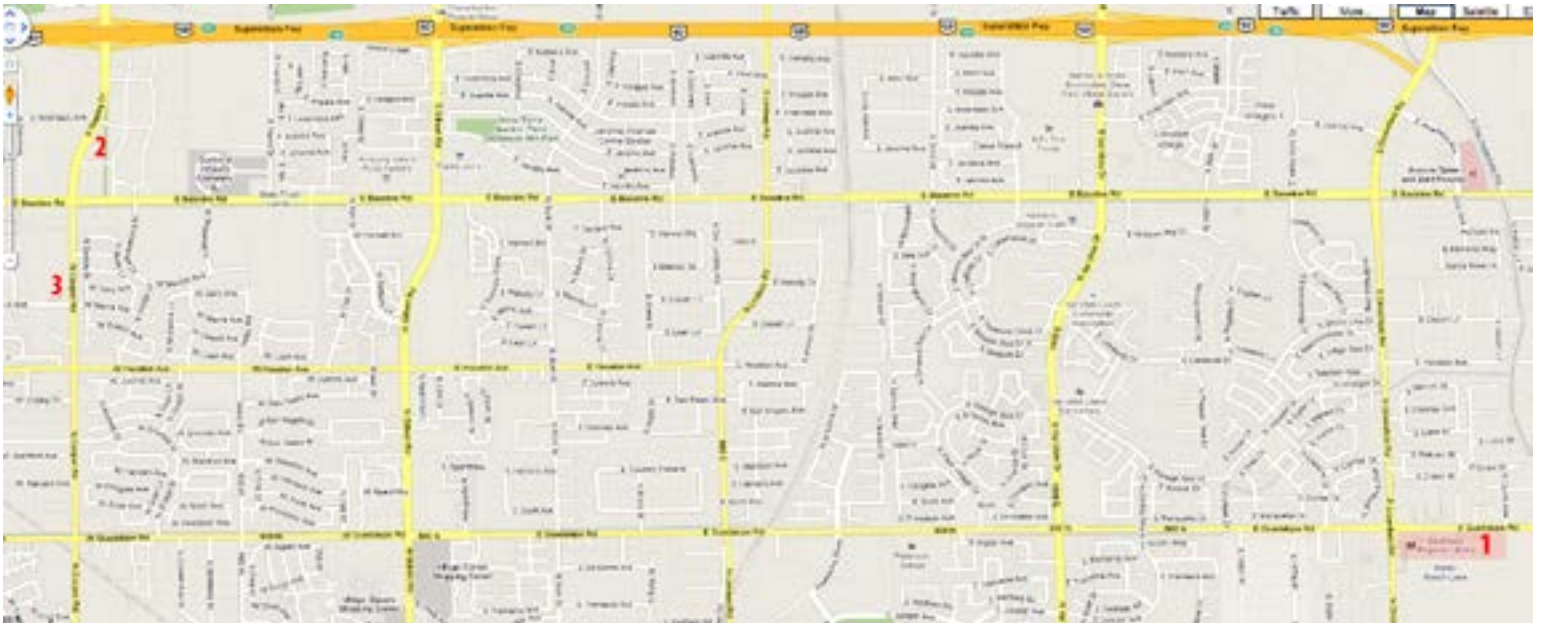
September 20

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



MARCH 2019

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

March 5 - Red Mountain Ranch Elementary

March 6 - Kyrene de la Mariposa

March 7 - Ida Redbird Elementary

March 8 - Public Star Party

March 9 - EVAC Star Party

March 12 - Kyrene de los Lagos Elementary

March 15 - EVAC Monthly Meeting

March 30 - 2019 Messier Marathon

APRIL 2019

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

March 6 - Phoenix Zoo Night Camp

March 6 - EVAC Star Party

March 8 - Public Star Party

March 19 - EVAC Monthly Meeting

March 25 - Sanborn Elementary

March 27 - 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	
New Member Dues (dues are prorated, select according to the month you are joining the club):	
<input type="checkbox"/> \$30.00 Individual January through March	<input type="checkbox"/> \$22.50 Individual April through June
<input type="checkbox"/> \$35.00 Family January through March	<input type="checkbox"/> \$26.25 Family April through June
<input type="checkbox"/> \$15.00 Individual July through September	<input type="checkbox"/> \$37.50 Individual October through December
<input type="checkbox"/> \$17.50 Family July through September	<input type="checkbox"/> \$43.75 Family October through December
<i>Includes dues for the following year</i>	

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

Name Badges:
<input type="checkbox"/> \$10.00 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**

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.

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