

THE OBSERVER



Galaxy Wars: M81 versus M82
 APOD March 25 2008, Credit: Rainer Zmaritsch & Alexander Gross

From the Desk of the President by Tom Mozdzen

The Messier Marathon is coming up soon (March 17). Here are two links for details [MM link1](#) and [MM link2](#).

Membership registrations continued to be healthy in February and we had a nice turnout for the monthly meeting. Melodie Kao filled in for Taisiya and talked about her research on brown dwarfs as well as how she shifted careers from architecture to astrophysics. Taisiya would still like to come back and talk about her exoplanet research at a future meeting.

Wayne Thomas described the various observing programs listed on EVAC's website and cautioned that once starting a program, it can become quite addictive. See Ken's meeting minutes further down in the newsletter for more meeting details.

Our March featured speaker will be Tom Polakis who will describe his CCD photometry work from his backyard observatory.

Tom Mozdzen

UPCOMING EVENTS:

- Public Star Party - March 9*
 - EVAC Star Party - March 10*
 - EVAC Monthly Meeting - March 16*
 - Messier Marathon - March 17*
- Check out all of the upcoming club events in the Calendars on page 10.*

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The Backyard Astronomer

by Bill Dellinges (March 2018)

Seeing the Big Picture with 7x50 Binoculars

And now for something completely different. Put aside that high powered telescope for a night and enjoy some large chunks of sky with the venerable 7x50 binocular. Even the typical birder 8x42 will suffice for this mission. Just be sure you're getting at least a six - degree real field; seven or eight degrees is even better. To enhance the view, mount the binocular on a tripod. A Vixen 7x50 binocular with a real field of seven degrees was used for the following observations.

In the January 2018 issue of Sky and Telescope (p.43), Binocular Highlights columnist Mathew Wedel suggested checking out an asterism called the Stingray just below Zeta Tauri, the tip of the Bull's right horn (stars 119-128 Tauri). That in itself is an interesting splash of stars reminiscent of that sea creature. The star group is also known as Collinder 65. Enjoying that asterism, I happened to slide southeast a bit and ran into another fine star group that filled my binocular field (stars 131 – 137 Tauri in the extreme southern region of Taurus). To my delight and surprise, shifting one binocular field east, I swept up another rich stellar field. I wondered hmmm, what's this? A quick check of chart 11 in Sky Atlas 2000 indicated I was hovering over the region of Orion's elbow (including the stars 67, 70, 73 and 74 Orionis amongst others) and home to NGC 2169, the "37" cluster. This completed a fine triad of monster star fields.

The Hyades: Back to Taurus! Most stargazers are familiar with the distinctive V – shaped pattern of stars representing the head or face of Taurus the Bull. The stars form the second closest star cluster (120 LY) to Earth after the Ursa Major Group (80 LY) which explains the large naked eye size of both clusters. I have always been struck by the beauty of the Hyades in binoculars. To really appreciate the full impact of this stellar wonderland, you'll need a binocular with the largest field you can get. To meet that challenge, I found the solution to be my Swarovski 7x42 with its eight- degree field.

The Pleiades (M-45): This object needs no introduction.

With the possible exception of the Big Dipper or Belt of Orion, the Pleiades might be the general public's most familiar pattern of stars in the night sky. It looks great in binoculars – no argument there. But what size binocular shows it best? One night I did an experiment. I aimed three tripod mounted binoculars at the Pleiades - 7x50's (FOV 7°), 16x70's (FOV 4°) and 28x100's (FOV 2.5°). In my opinion, the best view was through the 16x70's. The power was just right, and the 4 - degree field framed the cluster perfectly.

The False Pleiades: I can't remember where I heard about this asterism but it sounded interesting, so one night I went after it. It's easy enough to find, being only a few degrees from Polaris on a line to Gamma Cephei (Errai). The stars are plotted in Sky Atlas 2000, Chart 3 and the Bright Star Atlas, Page 2. The stars do form a likeness to the Pleiades but with a much larger apparent size - they filled the seven - degree field of my Vixen 7x50 binocular!

The Belt of Orion: When you think Orion, the first thing that pops into your mind is probably M-42, the Orion Nebula. But if you put a binocular with a field at least as big as the iconic three - star Belt of Orion, you will see something no telescope with its narrow field of view can handle. The background of the Belt is now filled with myriad stars that were just below the naked eye threshold. A binocular will reveal a stunning rich star field in and around the Belt. But there's more! Follow the starkest to the northwest (up and to the right) where the stars reach halfway to Bellatrix, Orion's left shoulder. Then the gems turn briefly northeast before fading out. It's quite a show, enough that the region around the Belt stars has the designation Collinder 70.

These vistas are only a few examples of the wide field wonders awaiting you in the night sky. It's a refreshing change from high power, one eyed viewing to seeing large fields measured in degrees rather than arc seconds or minutes.

Let's Party for March

Astronomical objects for public (and private) star parties, arranged by type.

by *Fulton Wright, Jr. Prescott Astronomy Club*

Flashy, deep-sky objects, visible in the middle of the month, at the end of astronomical twilight, 7:10 PM this month, (when it really gets dark). This list customized for Prescott, Arizona, should work well anywhere in the state, and be usable anywhere in the old 48 states.

Double Stars (2 or 3 stars, close together)

*name: Sigma Orionis (triple star) (another double nearby)
--alt name: SAO 132406
--Magnitudes: 3.8, 6.3, 6.6
--separation: 13 arc-seconds, 42 arc-seconds
--R.A.: 5hrs 39min
--Dec.: -2deg 36'

*name: Alpha Gemini (bright)
--alt name: Castor, SAO 60198
--magnitudes: 1.6 & 3.0
--separation: 5 arc-seconds
--R.A.: 7hr 35min
--Dec.: +31deg 53'

*name: Gamma Andromedae (colorful)
--alt name: Almach, SAO 37734
--magnitudes: 2.1 & 5.0
--separation: 10 arc-seconds
--R.A.: 2hr 4min
--Dec.: +42deg 20'

*name: Gamma Leonis
--alt name: Algiba, SAO 81298
--magnitudes: 2.2 & 3.6
--separation: 5 arc-seconds
--R.A.: 10hr 20min
--Dec.: +19deg 51'

Open Clusters (about 50 bright stars)

*name: Double Cluster
--alt name: NGC 869 and NGC 884, Caldwell 14
--magnitude: 5.3 and 6.1
--size: 18 and 18 arc-minutes, centers 28 arc-minutes apart
--R.A.: 2hr 22min
--Dec.: +57deg 05'

*name: M 37
--alt name: NGC 2099
--magnitude: 5.6
--size: 14 arc-minutes
--R.A.: 5hr 52min
--Dec.: +32deg 33'

*name: M 45 (binocular object)
--alt name: Pleiades
--magnitude: 1.5
--size: 120 arc-minutes
--R.A.: 3hr 47min
--Dec.: +24deg 07'

Globular Clusters (about 200,000 dim stars)

*name: M 79
--alt name: NGC 1904
--magnitude: 7.7
--size: 10 arc-minutes
--R.A.: 5hrs 24min
--Dec.: +24deg 31'

*name: M 3 (low but rising)
--alt name: NGC 5272
--magnitude: 6.2
--size: 18 arc-minutes
--R.A.: 13hrs 42min
--Dec.: +28deg 23'

Galaxies (about 200,000,000 very dim and distant stars)

*name: M 31 (M 32 & M 110) (low and setting)
--alt name: Andromeda galaxy, NGC 224
--magnitude: 3.4 (7.9 & 8.0)
--size: 180 x 70 arc-minutes (8 x 5 & 16 x 10)
--R.A.: 0hr 43min
--Dec.: +41deg 16'

*name: M 82 and M 81
--alt name: Bode's nebula, NGC 3031 and NGC 3034
--magnitudes: 6.8 and 8.1
--size: 21 x 11, 11 x 5 arc-minutes, 37 arc-minutes apart
--R.A.: 9hrs 55min
--Dec.: +69deg 23'

Let's Party for February

Continued from page 3

Galaxies (about 200,000,000 very dim and distant stars)

*name: NGC 2403
--alt name: Caldwell 7
--magnitude: 8.4
--size: 20 x 10 arc-minutes
--R.A.: 7hrs 37min
--Dec.: +65deg 36'

*name: M 94
--alt name: NGC 4736
--magnitude: 8.0
--size: 8 x 7 arc-minutes
--R.A.: 12hrs 51min
--Dec.: +41deg 07'

*name: M 51 (low but rising)
--alt name: Whirlpool Galaxy, NGC 5194
--magnitude: 8.0
--size: 14 x 12 arc-minutes
--R.A.: 13hrs 30min
--Dec.: +47deg 12'

Diffuse Nebulae (gas and dust lit by a nearby star)

*name: M 42
--alt name: Orion Nebula
--magnitude: ----
--size: 85 x 60 arc-minutes
--R.A.: 5hrs 35min
--Dec.: -5deg 27'

*name: NGC 2261 (small and dim)
--alt name: Hubble's Variable Nebula
--magnitude: 9
--size: 4 x 2 arc-minutes
--R.A.: 6hrs 39min
--Dec.: +8deg 45'

*name: NGC 2024 (put bright star out of field)
--alt name: Flame Nebula
--magnitude: 10
--size: 8 x 7 arc-minutes
--R.A.: 5hrs 42min
--Dec.: -1deg 52'

*name: NGC 2467
--alt name: ----
--magnitude: ----
--size: 8 x 7 arc-minutes
--R.A.: 7hrs 52min
--Dec.: -26deg 28'

Planetary Nebulae (gas shell from exploding star, looks like Uranus in telescope)

*name: NGC 2392
--alt name: Eskimo Nebula
--magnitude: 9.2
--size: 0.8 arc-minutes
--R.A.: 7hrs 29min
--Dec.: +20deg 55'

*name: NGC 1535
--alt name: Cleopatra's Eye
--magnitude: 9.4
--size: 0.8 arc-minutes
--R.A.: 4hr 14min
--Dec.: -12deg 44'

***miscellaneous (Supernova Remnant)

*name: M 1
--alt name: Crab Nebula
--magnitude: 8.4
--size: 6 arc-minutes
--R.A.: 5hrs 34min
--Dec.: +22deg 01'

EVAC General Meeting Notes for February 2018

The second meeting of 2018 was held on Friday, February 16, 2018 at 7:30 pm.

Wayne Thomas provided a presentation on the various Observing Programs that EVAC offers.

A viewing award was presented by Wayne to Lynn Young for completing the Globular Cluster Observing Program.

Our Treasurer, Lana Young, provided an update on EVAC's finances.

Lynn Young discussed all of the upcoming school visits. He reiterated his need for additional volunteers to help him with these events. Please come out and help even if you don't have a scope.

The main presenter of the night was Dr. Melodie Kao. She is a postdoctoral researcher at the School for Earth and Space Exploration at Arizona State University. Her

presentation detailed how she is attempting to characterize the magnetic fields of ultra-cool brown dwarf stars in an effort to understand the magnetic dynamo mechanisms operating in the mass regime that bridges planets and stars.

The 2018 All Arizona Messier Marathon will be held this year on March 17th, 2018, again at the Salome Emergency Airfield, near the Antennas Observing Site. Please go to <http://www.saguaroastro.org> for directions and the map. In addition, the field will be available on Friday Mar. 16h for an additional night of observing & socializing.

The next EVAC meeting is on March 16th – The presenter will be Tom Polakis. Topic: CCD Photometry from Inside The Light Dome.

We look forward to seeing everyone!

Save the Date - EVAC Silent Auction April 20th

EVAC will be putting up excess equipment for sale before the April 20th meeting. The format of the sale will be in a silent auction style. Watch the April newsletter for more details.

FULL MOON ON MARCH 1 AT 19:51

LAST QUARTER MOON ON MARCH 9 AT 06:20

NEW MOON ON MARCH 17 AT 09:12

FIRST QUARTER MOON ON MARCH 24 AT 11:35

FULL MOON ON MARCH 31 AT 08:37

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>.

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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www.starizona.com

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For Sale: Celestron Advanced VX equatorial mount.

Excellent condition. Rarely used. Asking \$600.

Celestron StarSense AutoAlign system. Excellent condition. Like new. Asking \$225.

I am simplifying my observing setup with the expectation that I will actually be able to observe more often.

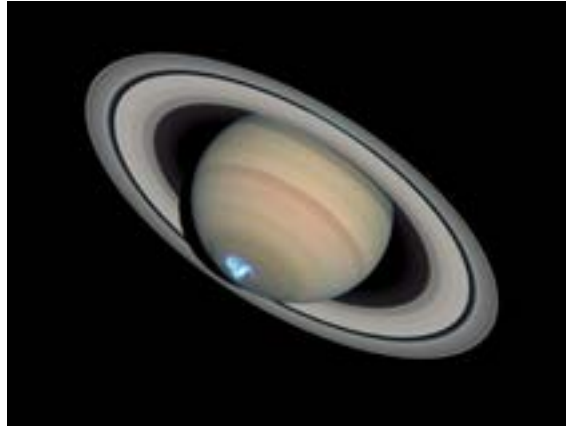
Email me for additional information.

Steve Platte: upuaut99@hotmail.com

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Upcoming Meetings

March 16

April 20

May 18

June 15

July 20

August 17

September 21

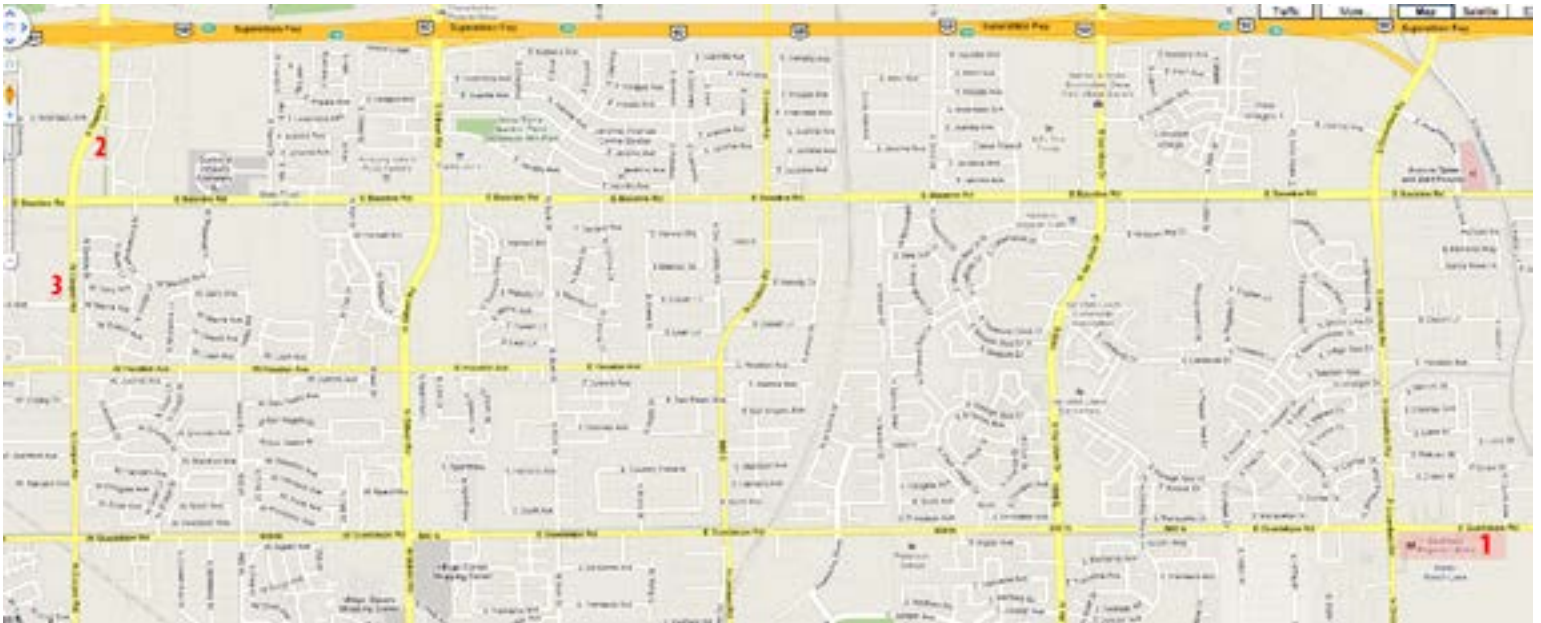
October 19

November 16

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 2017

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 1 - Pomeroy Elementary School

March 6 - Kyrene De La Mariposa School

March 7 - CGCC Star Party

March 9 - Public Star Party

March 10 - EVAC Star Party

March 16 - EVAC Monthly Meeting

March 17 - Messier Marathon

March 21 - Ida Redbird Elementary School

APRIL 2018

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					

APRIL 7 - EVAC Star Party

APRIL 13 - PUBLIC Star Party

APRIL 14 - EVAC Star Party

APRIL 14 - Phoenix Zoo Night Camp

April 20 - EVAC Monthly Meeting

APRIL 21 - Fountain Hill Dark Sky Night

APRIL 26 - Navarrete Elementary School

* - Indicates high turnout expected

East Valley Astronomy Club -- 2018 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:

- New Member Renewal 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 |
- Includes dues for the following year*

Renewal (current members only):

- \$30.00 Individual** **\$35.00 Family**

Name Badges:

- \$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:

Publish email address on website
URL:

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.evaonline.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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East Valley Astronomy Club
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