

# THE OBSERVER



Big Mars from Hubble - APOD August 27, 2003  
 Credit J. Bell (Cornell U.), M. Wolff (SSI) et al. STScI, NASA

## UPCOMING EVENTS:

- EVAC Star Party - July 7*
- Public Star Party - July 13*
- EVAC Star Party - July 14*
- EVAC Monthly Meeting - July 20*
- Explore the Night Sky - July 24*
- Check out all of the upcoming club events in the Calendars on page 9.*

## INSIDE THIS ISSUE:

### From the Desk of the President by Tom Mozdzen

As the summer heat sets in, it is not too early to start dreaming about the December Christmas Party. However, to make this happen we need a coordinator to organize it. We would like to hold it at a venue that can handle a crowd of 50 along with all the cars that we would bring. Please let me or a board member know if you would be willing to organize or help organize this party.

Also, GRCO can still use more help. Please contact Claude if you think you could spare a weekend evening helping out in any capacity.

The revised Bylaws passed unanimously last meeting. The proper paperwork will now be filed with the appropriate authorities. We are glad that this task is put to rest.

Our speaker next week will be Ted Blank from the Fountain Hills Astronomy Club. He will be speaking about the New Horizons spacecraft and its mission to Pluto and beyond. It will surely be a talk of interest as New Horizons is getting closer to its second target object.

Until next month,

Tom Mozdzen

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# EVAC General Meeting Notes for June 2018

by *Martin Pieczonka*

Tom Mozden started the meeting by inviting visitors to stand. We had several visitors and very good membership turnout for this meeting. Lana Young, our Treasurer reported that we now have 100 paid members and our income for May exceeded our expenses by \$154. There was a vote on the bylaws and Constitution update. The changes were passed unanimously.

Claude Haynes, our GRCO Observatory Manager, announced that the topic for the July 24th Explore The Night Sky presentation will be Jupiter: The Planet at the Top of the Charts. Claude also sadly reported that Mary Douglas, a long time member and supporter of EVAC passed away.

We still have some sale items available from the auction, please see Claude if you are interested.

Ray Heinle gave a presentation on PixInsight and said that there will be a class held in Mesa September 21-23rd.

The main presenter of the night was Dr. Michael West, Deputy Director of Science at Lowell Observatory. Dr. West talked about one of the most striking features of the distribution of galaxies in space - its filamentary appearance with long, luminous strands woven together into a vast cosmic web. Dr. West's talk also provided an overview of what the universe looks like on the largest scales, and showed how galaxies don't just illuminate the cosmic web - they are also shaped by it.



[Mary Douglas Obituary](#)



The next EVAC meeting is on Friday, July 20th. We look forward to seeing everyone!

**LAST QUARTER MOON ON JULY 6 AT 03:51**

**NEW MOON ON JULY 12 AT 22:48**

**FIRST QUARTER MOON ON JULY 19 AT 15:52**

**FULL MOON ON JULY 27 AT 16:20**

# The Backyard Astronomer

by Bill Dellinges (July 2018)

## Return to the North Rim Star Party

My wife Lora and I returned to the North Rim (NR) for the Grand Canyon Star Party after an absence of three years. It was good to be back. Two years ago, we hit the South Rim (SR) just for a change of scenery after a long run at the NR. Last year we had to cancel our trip to the star party because our air conditioner quit just before we planned to leave - bummer.

We prefer the NR because the SR in summer is just too darn crazy with the huge influx of tourists. You may have heard the NR only gets about 10% of the human traffic that the SR gets. This is pretty much true, but the NR operation is much smaller in scope than the SR. So the bottom line is – there's still too many people there as far as I'm concerned. But all in all, life at the NR is much more civilized and enjoyable for us. We especially like the fact that the area is more heavily forested than the SR. Note too, that the elevation is a thousand feet higher meaning less atmosphere the telescope has to look through.

There's something I should mention about the telescope location area. At the SR you have a huge parking area that can easily accommodate 50 or more telescopes. Not so at the NR. We set up our scopes on the lodge veranda overlooking wonderful views of the canyon. The downside is the area is only about 100 feet by 40 feet thereabouts. And about half that area is taken up by visitors' chairs and tables moved to one side to make room for about 10 telescopes. And you can't just pop in anytime during the week and set up a scope. You must reserve a specific night or nights with the NR coordinator from the Saguaro Astronomy Club. Because of the space problem, you may or may not secure a "spot." (Till about 10 years ago you could come and go as you pleased. And no paperwork).

We had about 10 telescopes in service the nights we were there. Set up were two 20" Dobsonians, Televue 101, Explore Scientific 6" refractor, 60 or 80mm refractor, Nextstar 11 and a couple of smaller Dobsonians. I

brought my Evolution 8. One day the wind kicked up when a thunderstorm blew through, knocking over a 12" Dobsonian. No glass was broken but it had to be retired due to structural damage. We also got a dose of rain that day.

Each night in the lecture hall, one of the stargazers gave a lecture on an astronomic subject from 8 to 9 pm. The crowd was then unleashed upon us to join a smaller group of folks who were chatting with us or just admiring our equipment. The timing worked out perfectly since it didn't get dark till 9 pm. As usual, the crowd was enthusiastic and appreciative. I'm always amazed how patient the public is about waiting their turn to look through a telescope. Weather wise, we lucked out – three of our four nights there were clear.

The first night I felt there were enough telescopes on the veranda so I set up my 16x70 binoculars at a trail-head a short distance from the scope area and snagged about 10 people to stop and take a look at Jupiter and its four moons and M-44, the Beehive Cluster. The next two nights on the veranda with my 8", I counted 78 and 98 guests, respectively, peering into my telescope at luscious targets such as Jupiter, M-4, M-7, M-65/66, M-51, and M-44. I had forgotten how impressive objects are in a truly (and natural) dark sky! Later in the evening after the public faded away, I got an opportunity to view Jupiter through one of the 20" telescopes. I was impressed. The planet looked huge at 235x, with many parallel belts and zones. Not bad for a short focal ratio reflector. An added bonus was a beautiful distinctly orange Great Red Spot sitting perfectly on the planet's meridian. I had not seen such an impressive image of Jupiter since looking through Peter Argenziano's 18" Dobsonian reflector with a binoviewer some years ago.

Attending the Grand Canyon Star Party is always a pleasure for us and great excuse to get away from the Valley of the Furnace for a few days.

# Let's Party for July

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: Beta Cygni  
--alt name: Albireo, SAO 87301  
--magnitudes 3.4 (yellow) & 4.7 (blue)  
--separation: 35 arc-seconds  
--R.A.: 19hr 31min  
--dec.: +27deg 58'

\*name: Zeta Ursae Majoris  
--alt name: Mizar, SAO 28738  
--magnitudes: 2.2 & 3.9  
--separation: 14 arc-seconds  
--R.A.: 13hr 24min  
--dec.: +54deg 56'

\*name: Epsilon Lyrae  
--alt name: Double-Double, SAO 67310 & 67315  
--magnitudes: 5.0 & 6.1, 5.3 & 5.4  
--separation: 2 arc-seconds, 2.5 arc-seconds  
--R.A.: 18hr 44min  
--dec.: +39deg 40'

\*name: 70 Ophiuchus  
--alt name: SAO 123107  
--magnitudes: 4.0, 6.0  
--separation: 7 arc-seconds  
--R.A.: 18hrs 06min  
--Dec.: +02deg 30'

## Open Clusters (about 50 bright stars)

\*name: Collinder 399  
--alt name: Coat-hanger  
--magnitude: 3.6  
--size: 90 arc-minutes  
--R.A.: 19hr 25min  
--dec.: +20deg 11'

\*name: IC 4665  
--alt name: ---  
--magnitude: 4.2  
--size: 70 arc-minutes  
--R.A.: 17hr 46min  
--dec.: +05deg 43'

\*name: NGC 6633 (use wide field)  
--alt name: ---  
--magnitude: 4.6  
--size: 30 arc-minutes  
--R.A.: 18hr 27min  
--dec.: +06deg 30'

## Globular Clusters (about 200,000 dim stars)

\*name: M 22  
--alt name: NGC 6656  
--magnitude: 5.1  
--size: 32 arc-minutes  
--R.A.: 18hr 38min  
--dec.: -23deg 53'

\*name: M 5  
--alt name: NGC 5904  
--magnitude: 5.6  
--size: 3.5 arc-minutes  
--R.A.: 15hr 19mmin  
--dec.: +02deg 05'

\*name: M 13  
--alt name: Hercules Cluster, NGC 6205  
--magnitude: 5.8  
--size: 20 arc-minutes  
--R.A.: 16hrs 42min  
--Dec.: +36deg 28'

\*name: M 4  
--alt name: NGC 6121  
--magnitude: 5.6  
--size: 8.7 arc-minutes  
--R.A.: 16hr 24mmin  
--dec.: -26deg 32'

# Let's Party for July

*Continued from page 4*

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

\*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'

\*name: M 51

--alt name: Whirlpool Galaxy, NGC 5194

--magnitude: 8.0

--size: 14 x 12 arc-minutes

--R.A.: 13hr 30min

--Dec.: +47deg 12'

\*name: M 106

--alt name: NGC 4258

--magnitude: 8.3

--size: 17 x 7 arc-minutes

--R.A.: 12hr 20min

--dec.: +47deg 12'

\*name: M 104

--alt name: NGC 4594

--magnitude: 8.2

--size: 8 arc-minutes

--R.A.: 12hrs 40min

--Dec.: -11deg 37'

\*Bright Nebulae:

\*name: M 17

--alt name: Omega Nebula, Swan Nebula, NGC 6618

--magnitude: 6.0

--size: 46 x 37 arc-minutes

--R.A.: 18hr 22min

--dec.: -16deg 10'

\*name: M 8

--alt name: Lagoon Nebula, NGC 6523

--magnitude: 6.0

--size: 90 x 40 arc-minutes

--R.A.: 18hr 05min

--dec.: -24deg 23'

\*name: M 20

--alt name: Trifid Nebula, NGC 6514

--magnitude: 6.3

--size: 29 x 27 arc-minutes

--R.A.: 18hr 04min

--dec.: -23deg 02'

\*\*\*Planetary Nebulae:

\*name: M 57

--alt name: NGC 6720, Ring Nebula

--magnitude: 8.8

--size 1.4 x 1.1 arc-minutes

--R.A.: 18hr 54min

--dec.: +33deg 02'

\*name: NGC 6543

--alt name: Cat's Eye Nebula, Caldwell 6

--magnitude: 8.1

--size: 0.4 arc-minutes

--R.A.: 17hrs 59min

--Dec.: +66deg 38'

\*name: NGC 6826

--alt name: Caldwell 15, Blinking Planetary Nebula

--magnitude: 8.9

--size: 2.1 arc-minutes

--R.A.: 19hr 45min

--dec.: +50deg 31'

## 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](#).

***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)***



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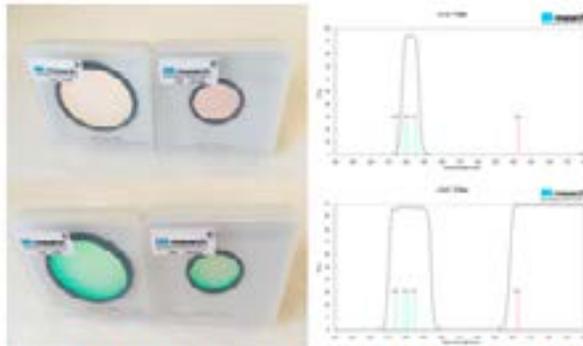
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# Upcoming Meeting

July 20

August 17

September 21

October 19

November 16

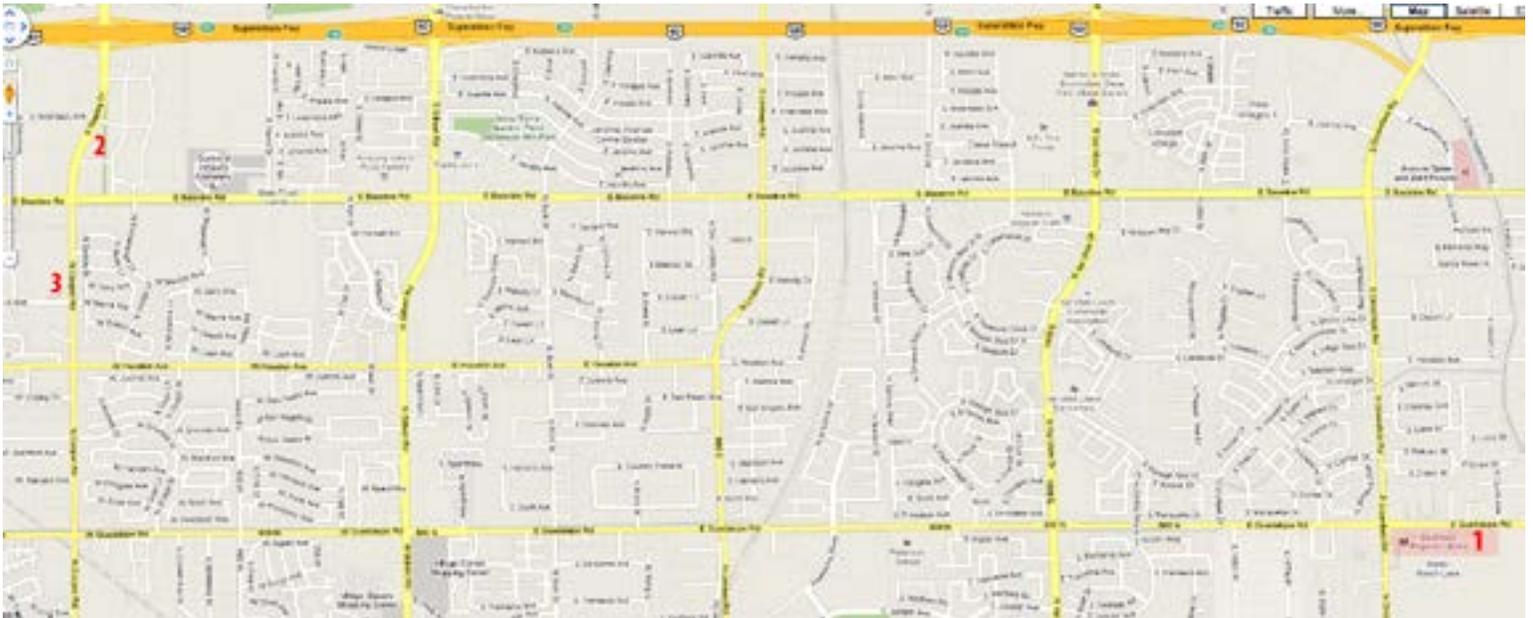
December 21

January 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



# JULY 2018

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

**July 7** - EVAC Star Party

**July 20** - EVAC Monthly Meeting

**July 13** - Public Star Party

**July 24** - Explore the Night Sky

**July 14** - EVAC Star Party

# AUGUST 2018

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

**August 4** - EVAC Star Party

**August 11** - EVAC Star Party

**August 10** - Public Star Party

**August 17** - EVAC Monthly Meeting

## 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:		
<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: <input style="width: 95%;" type="text"/>	Phone: <input style="width: 95%;" type="text"/>
Address: <input style="width: 95%;" type="text"/>	Email: <input style="width: 95%;" type="text"/>
City, State, Zip: <input style="width: 95%;" type="text"/>	<input type="checkbox"/> Publish email address on website
	URL: <input style="width: 95%;" type="text"/>

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.

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East Valley Astronomy Club  
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