

# THE OBSERVER



The Hercules Cluster of Galaxies - APOD July 16, 2009  
Credit and Copyright - Tony Hallas

## UPCOMING EVENTS:

*EVAC Star Party - July 6*

*EVAC Public Star Party - July 12*

*EVAC Meeting - July 19*

*EVAC Star Party - July 27*

*Check out all of the upcoming club events in the Calendars on page 9.*

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### From the Desk of the President

*by Tom Mozdzen*

With several of our members away on trips to the Grand Canyon Star Party, the Solar Eclipse in Chile, or simply to cooler northern latitudes, it can feel like the lazy days of summer are here. The monsoon season starts shortly, and it will be interesting to see what variety we get this year based upon May's unusual weather, and whether or not we get a late start as some are predicting.

In July we have the 50th anniversary of the Apollo 11 moon landing and walk. Who remembers where they were during that broadcast 50 years ago? At the July meeting, it

would be fun to hear a couple of sentences (30 to 60 second sound bites) from our members who wish to share a brief recollection of their memory of that event.

It might feel a bit early to be thinking about this, but Rob and I will be hitting our term limits, and the club will be needing a couple of volunteers to become our next President and Vice President. Three board members will also be hitting their term limits, so there will be three seats open for the November elections. Normally, the positions are not contested. We like to get our roster of next year

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# From the Desk of the President

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officers proposed in the September and October time frames. If you would like to get involved, please consider throwing your name into the running.

Finally, please contact Ken Milward if you have ideas or preference for a club sponsored field trip. He is in pro-

cess of proposing a trip or two, and is happy to hear from our members.

See you at the July meeting

Tom Mozdzen

## EVAC General Meeting Notes for June 2019

*by Tom Polakis*

The June meeting was attended by roughly 60 people. President Tom Mozdzen opened with an introduction of the officers, Board members, and administrative officers. He then welcomed visitors, of which there were many. Observatory Manager Claude Haynes gave the current status; as always, volunteers for the Friday and Saturday night sessions are welcome.

Our new Outreach/Events Director Ken Milward is interested in setting up field trips for the club. Contact Ken ([events@evaonline.org](mailto:events@evaonline.org)) if you have ideas or preferences.

Tom Polakis followed with a member presentation, showing the difficulties of observing asteroids in the Summer Milky Way. He also showed a musical slide show of the best Arizona astrophotographers' images, which was shown at a special SAC meeting at ASU five years ago.

During the break, folks consumed beverages and a special Solstice cake brought in by Ron and Jan Barstad.

The main speaker was Larry Wasserman, who made the trip from Lowell Observatory. He spoke about the asteroid 2014 MU69, which was the target for the New Horizons spacecraft after its historic Pluto flyby. NASA was in need of accurate positions of the asteroid, which could only be accomplished by watching it occult stars at multiple stations. During two expeditions to both Argentina and Africa in which 25 16-inch telescopes were employed, the group was able to get good data from five tracks. In addition to greatly refining the asteroid's position, the disappearances and reappearances matched the shape that was observed by the probe.

## The Backyard Astronomer

*by Bill Dellinges (July 2019)*

### My Favorite Astronomy Books

I just counted the astronomy books on my bookshelf. After having recently given away a dozen or so, I still have one hundred and sixty-seven. But I routinely use only about 10% of them. The others are mostly for reference or old nostalgic favorites which I just can't let go. What are these indispensable volumes?

#### Basic Star Atlases:

Bright Star Atlas 2000 by Wil Tirion and Brian Skiff (William-Bell, 2002). I like this slim atlas for its simplicity and large scale – each chart covers declination from +50 to -50 degrees and more than 4 hours of right ascension. Like Norton's, it has a facing page of data listing deep sky objects (galaxies, double stars, open clusters, variable

stars and planetary nebulae). Stars are shown to magnitude 6.5. At 12"x 9", it takes up little space and is a great grab and go reference. Note constellation lines are not indicated; I had to add them.

Sky Atlas 2000, second edition, Wil Tirion and Roger Sinnott (Sky Publishing Corporation, 1998). This is a large, beautiful atlas (16" x 12"). Stars to magnitude 8.5. Like the Bright Star Atlas above, pages are white with black stars. However, its deep sky objects and Milky Way are in various colors. This is my main go-to star atlas which, because of its size, I generally use at my desk at home or in my observatory. Only negative – as with the Bright Star Atlas, I had to draw in my own constellation lines.

# The Backyard Astronomer

Continued from page 2

## Stargazing aids:

Stars and Planets by Ian Ridpath and Wil Tirion (5th ed. Princeton University Press, 2017). This is my basic pocket handbook, my bible. I take it with me on any of my stargazing ventures. There are three main sections: 1) wide view maps of the night sky by season and latitude, 2) closeup star map, history, and interesting objects for all 88 constellations, (the most valuable section for me) and finally, 3) a surprisingly comprehensive astronomical primer.

The Backyard Astronomer's Guide by Terence Dickinson (Firefly Books, 2002, 2nd ed. A 3rd ed. is available). The book is divided into two halves, the first dealing with basic hardware – telescopes, mounts, eyepieces, filters. Last half is a good primer on observing techniques and imaging. This would also be an excellent reference for the beginning stargazer.

Deep-Sky Wonders by Sue French (Firefly, 2011). A wonderful compendium of 100 sky tours from noted Sky and Telescope columnist Sue French.

Atlas of the Messier Objects by Ronald Stoyan and Stefan Binnewies (Cambridge University Press, 2010). A large coffee table book of the 110 Messier objects, beautifully illustrated with color photographs of each object, along with discussions on their history, astrophysics and observational tips. Surprisingly, no finder charts are included but the book is so hefty it's probably best used at a desk anyway, where one could plan his/her night time raid using their preferred finder charts

## The Constellations:

Star Tales by Ian Ridpath (Universe Books, 1988) A small but concise reference on the history of the 88 constellations. There is a section on obsolete constellations.

Patterns in the Sky by Ken Hewitt-White (Sky Publishing, 2006). This small thin book (98 pages) is a good quick reference to the northern sky's constellations by seasons, their sky lore and main attractions.

## Double Stars:

The Cambridge Double Star Atlas. James Mullaney, Wil Tirion. (Cambridge University Press, 2009). Actually, a nice

spiral bound star atlas (with constellation lines drawn in!). In addition to the normal symbol of a double star, its technical name is indicated ( $\Sigma$  2504, h321, etc.). An index in back lists 2,325 doubles featured in the atlas with their ra/dec, magnitudes and separation. Any double star fan will love this book.

Sky Catalog 2000 Volume 2. Double Stars, Variable Stars and Nonstellar Objects. Alan Hirshfeld, Roger Sinnott (Sky Publishing Corp. and Cambridge University Press, 1985). Except for its brief introduction to these types of objects, the book basically lists the vital statistics of approximately 14,000 multiple star systems. I often refer to this book when researching or recording my observations of double stars.

(Both these books have a brief primer on double stars. Serious double star observers might consider Double and Multiple Stars and How to Observe Them for a more in-depth look at the subject. James Mullaney (Springer-Verlag, 2005).

## The Moon:

The Modern Moon, A Personal View. Charles Wood (Sky Publishing Corp., 2003). There are many fine books on the Moon out there, but I really like this one by Charles Wood, who writes the monthly Moon column in Sky and Telescope magazine. In this book, he takes you on a tour of the Moon's more interesting features and discusses their geological significance.

21st Century Atlas of the Moon. Charles Wood, Maurice Collins (West Virginia University Press, 2013). This spiral bound pictorial atlas of the Moon uses images of unprecedented resolution taken by the Lunar Reconnaissance Orbiter (LRO). It's like you were looking at the lunar surface while in orbit – which of course the LRO was!

## Galaxies:

The Cambridge Photographic Atlas of Galaxies. Michael König, Stefan Binnewies (Cambridge Press 2017). Galaxy lovers rejoice. This is the best book on galaxies I've seen in a long time. Two hundred and fifty galaxies, beautifully photographed by amateurs, are featured in a modest sized book (9 1/2"x11"). Each galaxy photo is accompanied by text describing their nature. There's an all-sky star

## The Backyard Astronomer

*Continued from page 3*

chart indicating the location of each galaxy on the inside front and back cover. No need to discuss more galaxy books. This book is all I need!

### **General Astronomy Textbook:**

Astronomy Today. Eric Chaisson, Steve McMillan (Pearson Education Inc., 8th ed. 2005). All the basic astronom-

ical information and principles I need, A to Z. This is a comprehensible, 735-page college level textbook. Most illustrations are in color. This is an impressive looking book! Available in a 9th edition (2017).

So now you know my secret. These 14 books are my most frequently used resources to satisfy my curiosity or to produce an article for you people.

## 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)***





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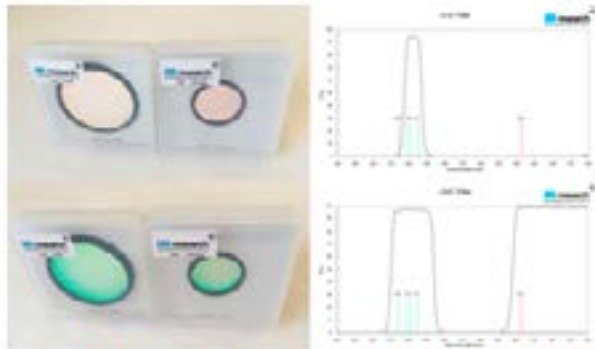
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## **For Sale**

Starter Telescope kit with Upgrades

Orion 90 mm mak cass with tabletop base  
Orion EQ-1 adjustable tripod mount + adapter  
Sirius plossl 25 mm eye piece  
Sirius plossl 10.0 mm eye piece  
EZ finder II  
Finder scope 6x30  
90 deg Star diagonal  
Correct image diagonal

Perfect, light weight telescope for home, traveling, kids, or adults. Comes with 2 mounts, tabletop and tripod w/ equatorial mount. It has 2 eyepieces, and 2 finder scopes, 2 diagonals: star and correct image.

This was purchased in the Fall of 2015 by an EVAC member and sold it to me 2 years later. It is in perfect condition. I added a carrying case to hold the scope and eye pieces. Over the past three years I have had many health issues with lengthy hospital stays. This has reduced my ability to use the telescope as often as I had wanted to.

For Sale Complete for \$250

[David Smith](#)



**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](#)



**NEW MOON ON JULY 2 AT 15:16**

**FIRST QUARTER MOON ON JULY 9 AT 06:55**

**FULL MOON ON JULY 16 AT 17:38**

**LAST QUARTER MOON ON JULY 24 AT 21:18**

# Upcoming Meetings

July 19

August 16

September 20

October 18

November 15

December 20

January 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**





# JULY 2019

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

**July 6** - EVAC Star Party

**July 19** - EVAC Monthly Meeting

**July 12** - Public Star Party

**July 27** - EVAC Star Party

# AUGUST 2019

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

**August 3** - EVAC Star Party

**August 16** - EVAC Monthly Meeting

**August 9** - Public Star Party

**August 31** - 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	
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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>
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East Valley Astronomy Club  
PO Box 2202  
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*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*