



THE OBSERVER

East Valley Astronomy Club



M27: The Dumbbell Nebula
APOD September 14, 2014 - Bill Snyder

EVAC This Month by Claude Haynes

We're going back to the moon! Well, at least ASU is. They have just been selected by NASA to create a CubeSat that will make polar orbits of the moon to analyze water deposits in the southern polar region. The LunaH-Map mission is a 6U CubeSat. One "unit" is a cube measuring 4.7 inches on a side; LunaH-Map strings six of these building blocks together and weights only about 30 pounds. Using a combination of "off the shelf" and custom equipment, the satellite will be built at ASU. This is the first mission that ASU will completely manage. This is a great opportunity for students and staff

at ASU for true scientific discovery.

Best wishes to Amber Doig, who received a NexStar telescope from the estate of Bud Schull. It was presented at our last meeting. Amber is a student at ASU, and has volunteered with our school star parties. I am sure it will get great use.

We also have some telescopes for sale at our September meetings. These are smaller telescopes that have been donated to EVAC. We also have some 8" telescopes and a refractor from the GRCO. These three each have a minimum bid

UPCOMING EVENTS:

- Local Star Party - September 5*
- Public Star Party - September 11*
- Deep Sky Party - September 12*
- EVAC Monthly Meeting - September 18*
- Lunar Eclipse - September 27*
- All Arizona Star Party - October 9-10*
- Check out all of the upcoming club events in the Calendars on page 15*

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Evac This Month

of \$100. We hope to raise enough to pay for the installation of our new pier at GRCO. That update will occur the middle of September, along with some new cabinets and storage.

I also have some encouraging news. David Douglass is doing better, and Dave Coshow is out of the rehab hospital and is now at home after their recent auto accident.

Our speaker for the next meeting is Steve Coe. Steve always has lovely photos and interesting comments. It

If It's Clear...

by Fulton Wright, Jr. Prescott Astronomy Club

September 2015

Celestial events (from Sky & Telescope magazine, Astronomy magazine, and anywhere else I can find information) customized for Prescott, Arizona. All times are Mountain Standard Time.

On Friday, September 4, the Moon is at last quarter phase, and rises at 11:25 PM.

On Saturday, September 12, it is new Moon and you have all night to hunt for faint fuzzies.

On Sunday, September 20, the Moon is at first quarter phase, and sets at 11:24 PM.

On Wednesday, September 23, we have equal days and nights, because it is the Autumnal Equinox.

On Thursday, September 24, if you are up about 5:30 AM, you can see some planets in a rough line in the East. Highest and brightest is Venus. Then comes the pair of Mars and Regulus, less than one degree apart. Then, nearest the horizon, is Jupiter. Mars and Regulus are also close the next morning.

On Sunday, September 27, it is full Moon, but don't give up hope of hunting for faint fuzzies, because...you can see much of a total Lunar eclipse that night.

should be a fun meeting.

Finally, I hope you go to our website at www.evaconline.org to sign up for the EVAC-Announce mailing list via the link on the home page, and that you check our calendar for school star parties that are starting up. There is a lot going on, and we are glad you are part of it.

Keep looking up.

Claude

Here is the schedule:

06:16 PM Partially eclipsed Moon rises.

06:20 PM Sun sets.

06:44 PM Civil twilight ends. (A few bright stars are visible.)

07:12 PM Total phase starts.

07:14 PM Nautical twilight ends. (Lots of stars visible.)

07:43 PM Astronomical twilight ends. (It's really dark.)

07:48 PM Mid eclipse.

08:24 PM Total phase ends.

09:28 PM Partial phase ends.

09:55 PM Last penumbra visible ?

10:23 PM Penumbral phase ends (unobservable).

This event will happen during a "super Moon" (the coincidence of a Moon at perigee [closest to earth and so looking slightly bigger than usual] and full Moon). See Sky and Telescope magazine, September 2015, p. 26 and Astronomy magazine, September 2015, p. 56 for further information. Another interesting feature of the Moon at this time is that libration will be practically zero which means we will see an average amount of the north, south, east, and west limbs. No particular edge of the Moon will be favored.

Rising in the Northeast – Fall Clusters!

Right on schedule, some very beautiful open star clusters (OC) are rising in the northeast. This places them in a convenient location for observing - you can knock them off one at a time as they peek above the horizon. The objects below are mostly showcase class and thus familiar to stargazers, but I have thrown in a few lesser known items still worthy of your consideration. The following observations were made with an 8" SCT from a major manufacturer (the tube was orange!).

NGC 7789 (Cas): I've always liked this relatively unknown OC in Cassiopeia. It's a fairly large cluster (15') unique in that most of its stars are of equal magnitude and a tad dim, like a grainy splash of old salt. For this object, the more aperture, the better, as its brightest star is only magnitude 10.7. It's located just west of Beta Cassiopeiae.

NGC 457 (Cas): An old favorite of gazers. A small OC (12') of bright and dim stars whose shape has garnered the nicknames the "Owl" or "E.T." cluster. My personal moniker for it is "The Airplane" cluster as it reminds me of a jet airplane with swept backed wings and two bright tail lights. By the way, the two stars of the tail lights, or eyes of the Owl or E.T., are the two brightest stars (A-C) of the quadruple star Phi Cassiopeiae (SAO 22191). In the 8" at 85x, A-C is easy of course (mag 5.1 and 7.8, sep. 133.8"). At this power I could also pick out D (mag. 10.5 near C). But it took 169x spot B (mag. 12.2) next to A.

NGC 663 vs. M103 (Cas): Ok folks, here's the deal. One might expect a Messier object to have more cachet than an NGC object. But I find NGC 663, only 13' from M103 a much prettier star cluster; it's larger, and has brighter stars.

NGC 752 (And): You don't hear much about this off the beaten path OC. It is located five degrees south-southwest of Gamma Andromedae. The eight inch's low power field of 0.8 degrees could not accommodate all the stars of this large (50') cluster – use binoculars on this object if you're limited to less than a one degree field

of view with a telescope. The cluster is impressive itself but also offers two bonus features! The cluster is kissed on its southwest corner by the wide double star 56 Andromedae (SAO 55102). If you're using binoculars on the cluster, they will easily split this pair. The A-B pair is magnitude 5.7 and 6.0 and separated by a generous 3.6'. Actually, this is a quadruple star but the other two stars are very faint (9.3 and 11.1). The second bonus object is the adjacent asterism on the cluster's west side called the "Golf Club" in which the double star 56 Andromedae represents the base of the club. Because of its size, this combination of cluster, double star and asterism should look very pleasing in 10x50 or 15x70 binoculars.

NGC 869/884 (Per): The splendid Double Cluster in Perseus needs no introduction. This gorgeous pair of OC's surely must rank in the top ten list of the most beautiful objects in the night sky. These colorful diamonds on black velvet cover about a degree of sky so you'll need a wide field of view to appreciate them at their best. The 8" at its lowest power can just barely fit both in the field. Newtonians and refractors can give that extra little field you need to frame the clusters. Better yet, use giant binoculars. My 20x100's with their 2.5 degree field offer an awesome view of the Double Cluster. Note the chain of stars running from the west cluster, NGC 869, north 1.5 degrees to the large (60') faint OC Stock 2 - an interesting side trip. The latter is big and faint, so use binoculars to differentiate it from the background stars of the Milky Way.

M34 (Per): With so many attractions like the above gems and M31 in the area, it's easy to overlook this fine, bright OC located midway between Gamma Andromedae and Algol in Perseus. The cluster is fairly large (34') and will fill the field of any SCT even at low power. So, like NGC 752, you might want to try midsized binoculars on this object

As you enjoy these fine open star clusters, consider them a foretaste of the winter treasures just around the corner.

Telescope Auction at the September Evac Meeting

There will be a telescope auction at the September EVAC meeting. The following pictures show the scopes that will be up for auction.

4.5 Inch Spectrum Short Tube Reflector



4.5 Inch Tasco Reflector



Telescope Auction at the September Evac Meeting

Continued from page 4

6 Inch Orion Reflector



60 mm Meade ETX



Telescope Auction at the September Evac Meeting

Continued from page 5

105mm Celestron Refractor



8 inch Meade SCT with cases



Telescope Auction at the September Evac Meeting

Continued from page 6

8 Inch Celestron SCT with Case



LAST QUARTER MOON ON SEPTEMBER 5 AT 05:54

NEW MOON ON SEPTEMBER 13 AT 02:41

FIRST QUARTER MOON ON SEPTEMBER 21 AT 4:59

***FULL MOON ON SEPTEMBER 27 AT 10:50**

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.

Planetarium Show at MCC from Mary Douglas

Friday, September 4, MCC (Mesa Community College) will begin its Fall Planetarium Show sea-son with Stars of the Pharaohs. Shows run about every 30 minutes from 6:00 PM to 10:00 PM. The show and ample parking are free. Tickets are first come first serve due to only 52 seats being available. If you wish to attend a show, phone me the day before and your tickets will be in my pocket as early shows usually are “sold out.” For seven years I have been a volunteer at these shows. Also after dark, weather permitting, a 10” telescope will focus on Saturn and/or the Moon. NASA videos are sometimes shown in classrooms. The URL is: <http://www.mesacc.edu/planetarium>. Keep looking UP!

If you have any questions contact “SKY” Mary at 480-756-4320.

2015 All Arizona Star Party

October 9-10 Hovater Rd. Airfield

Friday - Potluck at 05:00 PM

Saturday

Temperance Union Happy Hour at 04:00 PM

Raffle at 04:30 PM

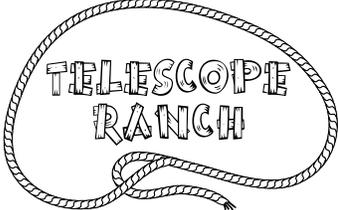
Dinner at 05:00 PM

***Dinner is 5\$ and the raffle ticketts are
1\$,each or 6 for 5\$***

***Please observe dark sky etiquette. Minimize
extra light, and if you will be leaving early,
please park closer to the exit.***

Check the EVAC website for details.

http://www.evaconline.org/aasp_2015.htm



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Dobsonian Telescope For Sale

In April of 1992 I bought a dobsonian telescope with a 17.5" mirror from Coulter Optical. They are no longer in business. I paid \$1239.13 for the telescope. (Tax incl.) I have enjoyed using it but no longer have the means to transport it to a dark sky. The telescope needs to be used by someone who can get full use out of it so I am ready to bid farewell. I have the original operating guide. Some of the specifications are as follows:

- Mirror Diameter = 17.5
- Mirror Focal Length = 78.85
- Obscuration diameter = 4.25
- Focal ratio F/# = 4.5

I have just the original eyepiece that came with it. I never bought any extra eyepieces or filters. The overall condition of the telescope is good, but the mirror has never been cleaned. If you'd like to hear more about it, you may e-mail me. You can also leave a message at 480-483-3071. I will call back as soon as I get a chance.

Fred Marderness (reednote@yahoo.com)



Meade 10inch F/4 Schmidt Newtonian Telescope For Sale

Purchased in 2003, this Meade 10 inch F4 Schmidt-Newtonian is being offered by a gentleman who is no longer able to observe.

Please contact karenaramos@yahoo.com if interested. OTA has been stored inside. There is a pier with clock drive that has been outside and is included.

If interested, please contact Karen Ramos (karenaramos@yahoo.com)

Upcoming Meetings

September 18

October 16

November 20

December 18

January 15

February 19

March 18

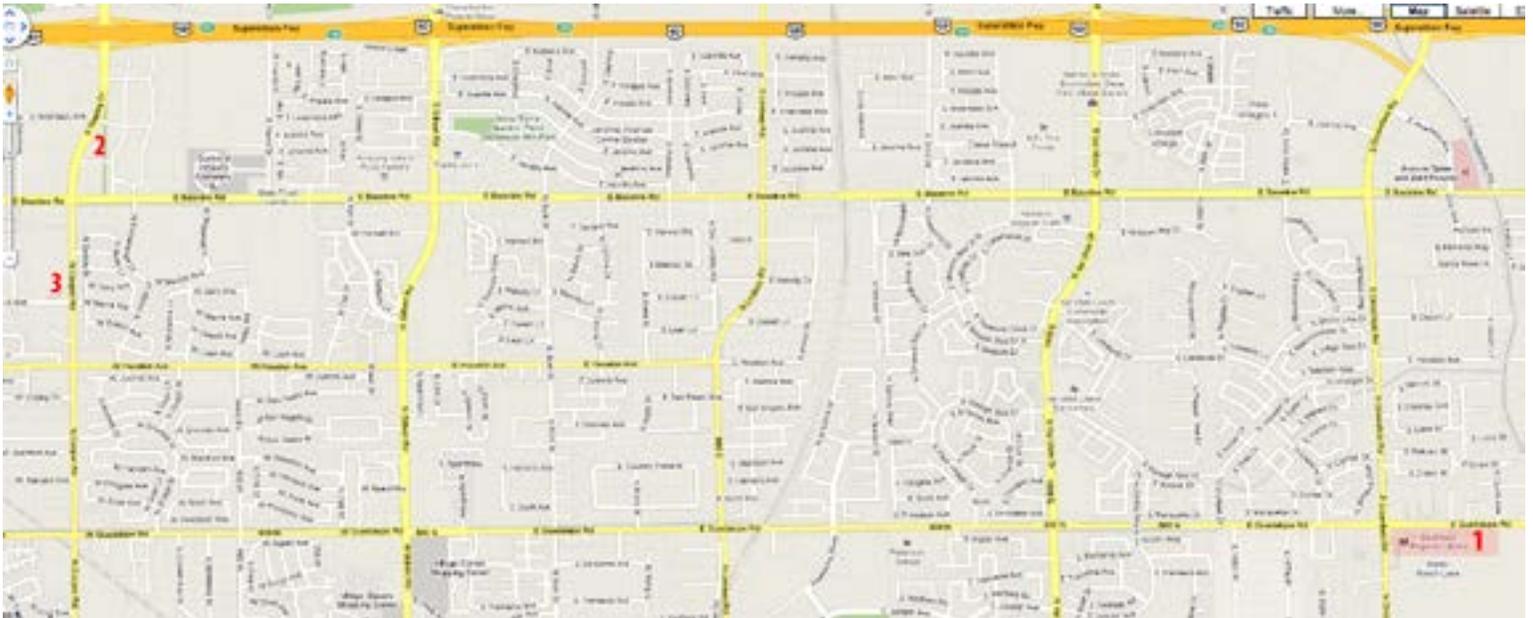
April 15

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.

All are welcome to attend the pre-meeting dinner at 5:30 pm. We meet at Old Country Buffet, located at 1855 S. Stapley Drive in Mesa. The restaurant is in the plaza on the northeast corner of Stapley and Baseline Roads, just south of US60.

Visitors are always welcome!



2

Old Country Buffet
1855 S. Stapley Drive
Mesa, Az. 85204

1

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



SEPTEMBER 2015

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			

Sept 5 - Local Star Party

Sept 18 - EVAC Monthly Meeting

Sept 11 - Public Star Party

Sept 27 - Lunar Eclipse - GRCO is open

Sept 12 - Deep Sky Party

OCTOBER 2015

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

Oct 3 - Local Star Party

Oct 16 - EVAC Monthly Meeting

Oct 9 - Public Star Party

Oct 19 - CGCC Star Party

Oct 9-10 - All Arizona Star Party

East Valley Astronomy Club -- 2013 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:

How would you like to receive your monthly newsletter? (choose one option):

- Electronic delivery (PDF) *Included with membership*
 US Mail **Please add \$10 to the total payment**

Areas of Interest (check all that apply):

- | | |
|--|---|
| <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 |

Please describe your astronomy equipment:

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.

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. Printed copies are available at the monthly meeting. Mailed copies are available to members for a slight surcharge to offset printing and mailing expenses.

Please send your contributions, tips, suggestions and comments to the Editor at: 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.

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www.evaonline.org

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