



THE OBSERVER

East Valley Astronomy Club



The Sombrero Galaxy from Hubble
APOD 2011 May 15

EVAC This Month by Claude Haynes

Happy Birthday Hubble. It's been 25 years since Hubble was launched. We don't have too many members around the age of 25, so most of us recall the time before this scientific wonder was launched. Even the highest resolution ground based pictures of galaxies at the time were mostly fuzzy blobs. A space telescope was proposed as early as 1923. It was funded in the 70's, but faced technical delays, budget problems and the launch was pushed back by the Challenger disaster. It was planned for low earth orbit so that future missions could change the FILM canisters. By the time

it was actually launched digital photography had arrived. In the HST's early days it was seen as an engineering disaster and a boondoggle after the mirror was determined to have been ground incorrectly. While it could accomplish some science, its vision was rescued by the 1993 space shuttle mission that added corrective optics to focus the light for its cameras. The resulting pictures have wowed us ever since. So has the science. We have explored supernovas and stellar nurseries. Millions of galaxies in single image, and we have peered into the hearts

UPCOMING EVENTS:

- Public Star Party - May 8*
- Local Star Party - May 9*
- EVAC Monthly Meeting- May 15*
- Deep Sky Party - May 16*
- Check out all of the upcoming club events in the Calendars on page 10*

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Evac This Month

of globular clusters, a zoo of exotic merged galaxies and proof of Einstein's theories of space, time and the properties of light from gravitationally lensed galaxies. The last servicing mission has replaced many instruments and given Hubble a chance to provide even more beautiful images for years to come. However, I recall a back-page Sky and Telescope article of a teenager's science project. It was a simple experiment of showing a Hubble picture of Saturn, and then asking the viewer to look through a telescope to see a live image. The survey results showed that 100% of the respondents

preferred looking through the telescope. For sheer joy, 25 years of amazing images can't compete with 400 years of humans putting eye balls to telescope lenses or millennia of people just gazing skyward.

Join us on May 15 to hear Dr. Steven Desch discuss Ceres and Pluto. He may even have a few Hubble images to show.

Keep looking up..

If It's Clear...

by Fulton Wright, Jr. Prescott Astronomy Club

May 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.

Toward the end of the month, Venus will be approaching Castor and Pollux.

On Friday, May 1, about 8:00 PM, you can see Mercury low in the west-northwest near the Pleiades. If you follow it with a telescope each night, you will see it get lower (after a few days), bigger, and more crescent shaped. This is the best apparition of the year for Mercury.

On Sunday, May 3, at 7:04 PM, the full Moon rises, spoiling any chance of seeing faint fuzzies for the night. At 8:15 PM Callisto goes in front of Jupiter. 6 minutes later Io goes behind Jupiter.

On Sunday, May 10, the Moon is at last quarter phase and rises at 12:24 AM (Monday).

On Sunday, May 17, it is new Moon and you have all night to hunt for faint fuzzies.

On the night of Thursday, May 21, Saturn is at opposition and visible all night.

On Friday, May 22, about 8:00 PM, you can see the north-east (IAU) part of the Moon at its best. Libration tips that part toward us. Starting at the terminator in the north, look for Hercules, Atlas, and (a little further north) the smooth,

dark floor of Endymion.

On Monday, May 25, the Moon is at first quarter phase and sets at 1:18 AM (Tuesday).

On Tuesday, May 26, between 9:05 PM and 10:02 PM, the Moon covers the star, 79 Leonis. The star is probably two 6th magnitude stars, very close together. See if the brightness drops in steps. Later that night, several 7th magnitude stars are occulted.

On Wednesday, May 27, you can see some events with Jupiter's moons. Here is the schedule:

- 08:06 PM Io moves from in front of Jupiter. Both Io's and Ganymedes' shadows are on the planet. The great red spot is transiting Jupiter's meridian.
- 08:52 PM The shadows almost merge. Io becomes dimmer because it is in Ganymedes' shadow.
- 09:16 PM Io's shadow leaves Jupiter.
- 09:29 PM Ganymedes' shadow leaves Jupiter.

The Backyard Astronomer

by Bill Dellinges (May 2015)

FAQ at Star Parties

Over the years I've come to notice certain questions from the public seem to come up repeatedly. I find it interesting that as different generations peer into my telescope, something in their common core of curiosity elicit these same questions. They are the easy questions whose answers I have regurgitated for longer than some of them have been alive. They also offer a reprieve from the more difficult questions like "What are cosmic strings?" (Oh-oh, now I wish I had read that last S&T article on the subject). While there are many general astronomical questions, the ones that don't seem to fall into two categories: Hardware and Personal. Do some of these questions sound familiar to you?

Hardware:

1) How much did this telescope cost? If I'm using a C-8 or CPC-11, I can answer \$1500 or \$2800. The response is usually, "Oh, I thought it would be much more than that." If I'm using the Astro-Physics 5" on the Losmandy mount, I answer "Today it would run you about \$7000." Then I hear either silence or a choking sound.

2) How much does it weigh? It depends on the equipment, SCT's are about 40-70 pounds, refractors 100-150 pounds.

3) How long does it take to set up? Twenty to thirty minutes.

4) Do you own the telescopes (or does the school)? We personally own our telescopes.

5) How far can this telescope see? I can show you a galaxy 60 million light years away or even a faint star-like thing called a quasar 2.4 billion light years away.

6) How far does your laser reach? With my 100 milliwatt laser you can see its impact on a mountain a mile away and until such activity was recently banned, we could blast one another on opposite sides of the 10 mile wide Grand Canyon during the summer star parties there.

7) How much do they cost? From about \$80 to \$200.

8) Where can I get one? www.optotronics.com or Google "green lasers" for other vendors.

9) Can I try your laser? (this question is usually from kids) I tell the person it can be a dangerous thing to handle for people not familiar with the device and thus it's best that I retain possession of the laser for safety reasons.

Personal:

10) What's the best observatory to visit? I've visited many observatories over the years and I think Kitt Peak Observatory, 50 miles west of Tucson, offers a visitor the best experience regarding ease of access, visitor's center, gift shop, 360 degree view of the surrounding desert from 6,800 feet and the cluster of 20 plus observatories perched on the peak – 3 of which are open to the public. Kitt Peak also offers night time viewing sessions through telescopes. McDonald Observatory, near Fort Davis in west Texas, would be a close second.

11) Are you a teacher or astronomer? No, astronomy is just a hobby for me. Though several of us do have a scientific and/or teaching background, we are just amateur astronomers or what you might call backyard stargazers who enjoy sharing our interest in astronomy with the public.

12) How long have you been into astronomy? Astronomy has been my hobby for 60 years. I acquired my first telescope in 1955 when I was 12 years old. Some of our members only started a few years ago. It's never too late to catch "star fever"!

13) Have you ever seen a UFO? No, but I have seen very bright meteors, space junk burning up in the atmosphere and what turned out to be missile launches.

14) What's the most impressive thing you've seen? A total solar eclipse takes first place. Runners up would include the rings of Saturn, the Pleiades ("The Seven Sisters") star cluster in large binoculars and Mars in a 9 inch refractor during a close opposition. There is also something called the Zodiacal Light. It's a spear-like shaft of light reflecting off solar system dust and extending up from the western horizon in spring after sunset or before sunrise above the

The Backyard Astronomer

Continued from page 3

eastern horizon in fall. It can only be seen if the night sky is very dark. I have seen this splendid sight from the summit of Mauna Kea on the island of Hawaii, southeast Arizona and recently from Organ Pipe National

Astronomical League Membership by David Douglass



As this newsletter is being published, it is the first of May, which is the time when EVAC re-builds its Roster to the Astronomical League (AL). Each year, EVAC renews its membership, and includes those individual EVAC members who also want to be associated with the AL programs. All officers, board members, and committee chairs are automatically added to the roster, with their dues paid by EVAC. This is a **"Very Good Reason"** to be an active officer-board member-committee chair. Membership in the AL is entirely voluntary, and NOT required.

You can have a membership with the AL by one of two methods. You could be a Member-At-Large (thus, an individual), and your dues would be \$40 per year. Or, the more

Monument in southwest Arizona. The latter view was enhanced by the presence of the planet Venus placed perfectly centered in the shaft of light.

desirable method, is to belong to a "Member-Society", and have your AL membership through them. EVAC is a "Member-Society" of the AL. Under the "Member-Society" arrangement, individual dues for EVAC members are reduced to \$7.50 per year.

Membership in the AL provides 4 quarterly newsletters (The Reflector). There are many additional benefits as well. You would have full access to the full list of Observing Programs (currently 49 different programs, and growing), as well as discounts on various books and other merchandise through the AL store (web based). The AL holds a national meeting (The ALCON), which this year is being held in Las Cruces, NM on July 6-11. In 2017, the ALCON will be held during mid Aug, in Casper, WY, which just happens to be center track for the total solar eclipse.

As EVAC's ALCOR (Correspondence Representative), I will be preparing the roster for submission. If you would like your name added to the list, please let me know. I will try and present a short information talk (5-min variety) at the May EVAC meeting.

If you have questions, you can email me at: david@az-douglass.net, or see me at the May EVAC meeting. You can also browse the AL's web page for lots of information. It is located at: <https://www.astroleague.org>.

***FULL MOON ON MAY 3 AT 23:42**
LAST QUARTER MOON ON MAY 11 AT 06:36
NEW MOON ON MAY 18 AT 00:13
FIRST QUARTER MOON ON MAY 25 AT 13:19



Dr. Steven Desch "Ceres and the Planet Pluto and Charon"
Evac Meeting - May 15, 2015



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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)

Upcoming Meetings

May 15

June 19

July 17

August 21

September 16

October 16

November 20

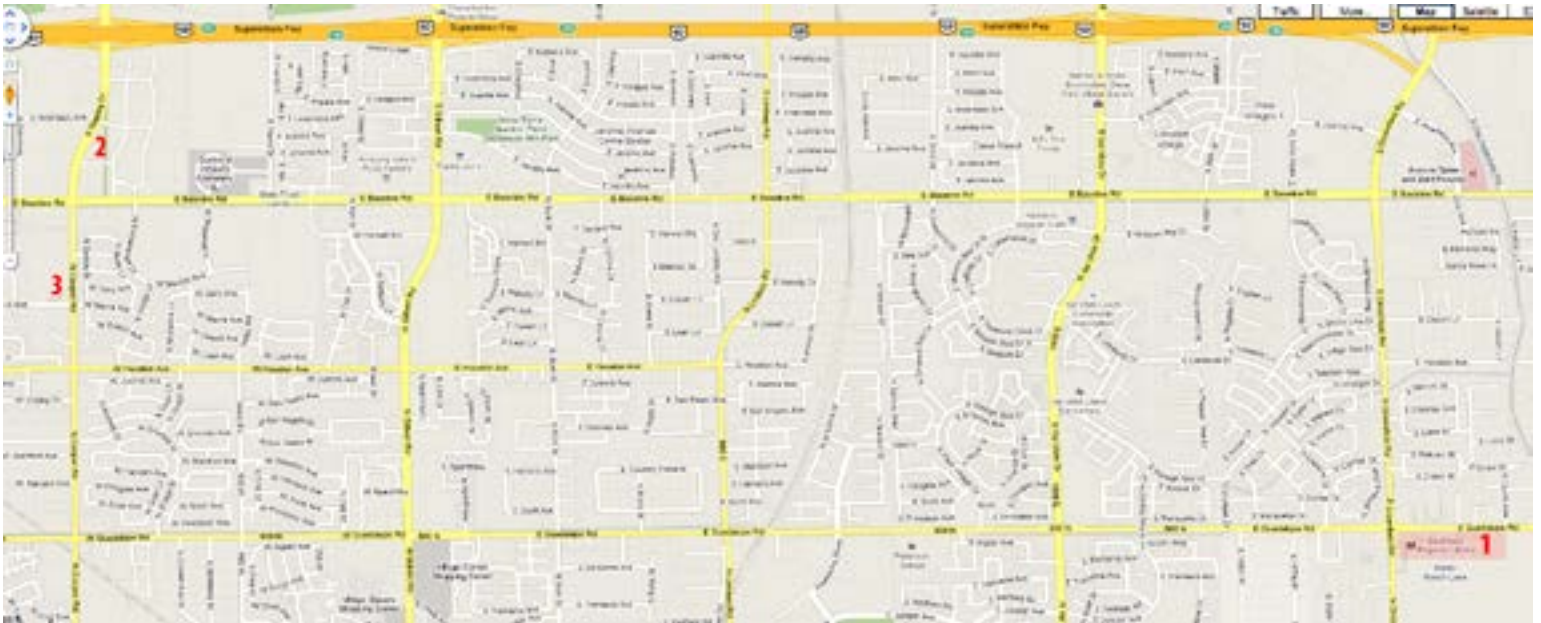
December 18

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.

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



MAY 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

May 8 - Public Star Party

May 16 - Deep Sky Party

May 9 - Local Star Party

May 20 - Sequoia Path Finder Academy

May 15 - EVAC Monthly Meeting

JUNE 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				

June 12 - Public Star Party

June 19 - EVAC Monthly Meeting

Jun 13 - Local Star Party

June 20 - Deep Sky 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.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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www.evaonline.org

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