



East Valley Astronomy Club

October 2003

www.eastvalleyastronomy.org

Scottsdale, Arizona

October 2003



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From the Desk of the President

by

**Peter Argenziano
2003 EVAC President**

This month's installment is submitted in absentia – I'm currently some 9,000 km away, in the mountains separating Poland and Slovakia. I'll be back home in time for our October meeting...

I'll start this article by reminding everyone about the 2004 elections once again. All nominations will be announced at the October meeting, as well as being published on the website. Voting will occur at the November meeting. Complete details about the election process are available here: <http://www.eastvalleyastronomy.org/EVAC/04elect.htm> Nominations for, and elections to, any office are open to any member-in-good-standing. Officers and Board members serve a period of one year. No member may serve more than two consecutive terms in the same office. I urge you to step up and volunteer for a position – the club is only as good as you make it.

The Mars Watch continues after close approach, as evidenced by these upcoming events:

Mars Watch in Gilbert	Wed. Oct. 1 at 7:30 PM	Riparian Preserve
Mars Watch in Gilbert	Fri. Oct. 3 at 7:30 PM	Riparian Preserve
Mars Watch in Gilbert	Fri. Oct. 10 at 7:30 PM	Riparian Preserve

Complete details can be found on our website, in the Calendar of Events.

As we leave the heat of the summer behind us, and the monsoon storms subside, it can only mean one thing: it must be time for a big star party. The East Valley Astronomy Club announces the annual All-Arizona Star Party! This year's big event is scheduled for October 24th and 25th at Farnsworth Ranch (south of Arizona City). The site is the same one used for the annual Messier Marathon.

The site is located midway between Phoenix and Tucson, west of Interstate 10. The sky conditions are reasonably good, almost matching those of the Vekol Road site. The site offers the right combination of dark skies, good visibility and temperate nights that will encourage you to stay up well past your bedtime! There are the predictable glows from Phoenix and Tucson, but not much else to complain about. Most of the flora is small creosote bushes, so horizons are very low. It is important to note that this site is on private land. This is a primitive site - so if you need something you'll have to bring it with you! Porta-Potties will be available on site. Attendees are welcome to camp overnight at AASP.

To get there depart I-10 at Exit 200, Sunland Gin Road. Take this road south (a right turn if coming from Phoenix, a left turn if coming from Tucson). Note: this is the closest place for gas and food after leaving the interstate. The paved road continues for 17 miles, and then it turns sharply to the west (right). Continue west for 4 miles. The main road turns south (left) just past the "Silverbell Estates" sign. Continue south for 3 miles past the sign, the road veers off to the west (right). Continue on the road for another 5 miles, where it passes through a gate. Take an immediate left after the gate, and continue for 0.7 miles. Take the next right on a road that leads into an open field. Just follow the signs along the road into the observing field. Please reduce

you speed as you approach the observing field. Once on the field, please do not exceed 5 mph so as not to kick up an unnecessary dust.

Complete details about the 2003 All-AZ Star Party are available here: <http://www.eastvalleyastronomy.org/EVAC/aasp.htm>

The close approach of Mars has kindled in me a renewed interest in planetary observing. While the red planet continues to present a worthy target, another solar system member beckons in the coming months: the ringed planet. This year is a great year to observe Saturn, the sixth planet from the Sun (9.5 AU). It's second in size to Jupiter with an equatorial diameter of almost 75,000 miles, and a mass 95 times that of Earth. Measured from edge to edge, Saturn's rings span about 600,000 miles, or about 2 times the distance from Earth to the Moon. At opposition (on December 31) the apparent equatorial diameter of the disk will measure 20.6" (arcseconds) and 46.6" including the ring system.

Like Jupiter, Saturn presents a series of bright zones and dark bands running parallel to the equator. Its poles are somewhat flattened due to the speed of rotation: a day on Saturn is 10 hours and 39 minutes long. Its revolution of the Sun takes 29 Earth years. Saturn's atmosphere is mostly hydrogen, with small components of helium and methane. It is the only planet less dense than water; it would float in an ocean if such a circumstance could be arranged.

When one thinks of Saturn, its majestic rings made of water ice and rock immediately come to mind. The ring system is divided into seven components, alphabetically labeled in order of discovery. Working from the innermost to the outermost ring: D, C, B, A, F, G and E. Each major division is actually comprised of hundreds of ringlets. The F and G rings are extremely thin and difficult to see while the A, B, and C rings are broad and quite visible in most amateur telescopes. A gap, called the Cassini division after its discoverer Giovanni Cassini, is located between

the A and B rings. The Encke gap is situated between the A and F rings.

Saturn has eight major satellites (a total of thirty known moons), ranging in approximate visual magnitude from Titan (8) to Hyperion (14). In charts they are usually referred to by Roman numerals, as shown in this table:

I	Mimas
II	Enceladus
III	Tethys
IV	Dione
V	Rhea
VI	Titan
VII	Hyperion
VIII	Iapetus

As October begins, Saturn is rising around 23:30 and culminating around 06:40. On Halloween it will rise at 21:38, transit at 04:46 and set at 11:50 (on November 1). By the end of November Saturn will be rising around 19:30 and positioned nicely for viewing throughout the night. It will continue to be a most welcome target during the winter months. This year is especially favorable for Saturn watching, as the rings are inclined about 25° as seen from Earth, presenting their southern side to observers.

Keep looking up!

**If it's clear...
by
Fulton Wright, Jr.
Prescott Astronomy Club
for August 2003**

Shamelessly stolen information from Sky & Telescope magazine, Astronomy magazine, and anywhere else I can find info. When gauging distances, remember that the Moon is 1/2 a degree or 30 arcminutes in diameter. All times are Mountain Standard Time unless otherwise noted.

Mars is now convenient to observe but getting smaller all the time. Here are the transit times, when it is highest in the sky:

Date	Transit	Size
10/1	10:04 PM	21 arcseconds
10/15	9:15 PM	18 arcseconds
10/31	8:30 PM	15 arcseconds

Four comets are expected to be visible in the next few months. Some are too far south for us to observe them, but you might be able to catch the others.

See Sky & Telescope, October 2003, p. 102 for details.

On Monday, October 20, about 5:00 AM you have your best

chance of seeing the most spectacular and hardest to see impact basin on the Moon. In spite of its name meaning east, Mare Orientale is located on the western limb of the Moon. (If you look at the sky with north up, east is on the left; but if you look at a globe of a planet or moon, west is on the left where Mare Orientale is.) Libration tips this part of the Moon slightly toward us. On the bottom of the Moon (as you are viewing it with binoculars) near the limb, look for the dark crater Grimaldi. Also near the limb to the right is the smaller, bright crater Byrgius A. Between these two, right at the limb is the pretty much edge on view of Mare Orientale. The view should be good a night before and after and you can always see more if you use a telescope. See Sky & Telescope, October 2003, p. 92 & 116 for more details.

On Sunday, October 26, about 6:15 PM you might be able to see the thin crescent moon and Venus together. With binoculars look low in the southwest for the Moon a few degrees to the left of Venus.

Schedule of Events - October, November, December 2003
East Valley Astronomy Club
 by
Howard Israel

Date	Event	Location	Notes
		October Events	
Wed. Oct. 1	Public Mars Observing	Riparian Preserve	7:30 - 10:30 PM Mars viewing
Fri. Oct. 3	Public Mars Observing	Riparian Preserve	7:30 - 10:30 PM Mars viewing
Sat. Oct. 4	Anderson Mesa Tour	Flagstaff, Arizona	1:00 PM @ Anderson Mesa
Wed. Oct 8	General Meeting	SCC - PS 172	7:30 PM Speaker - Scott Davis IDA
Fri. Oct. 10	Public Star Party	Gilbert Library	7:00 PM Setup
Sat. Oct. 11	Beginners Lab	Dave Coshows' home	7:00 PM Setup
Sat. Oct. 18	Local Star party	Boyce Thompson Arboretum	Sunset: 5:51 PM
Wed. Oct. 22	ORIONID METEOR SHOWERS		
Fri. Oct 24	Begin All Arizona Star Party	Arizona City	Oct. 24 - 25 Sunset: 5:45 PM
		November Events	
Sat. Nov. 1	Fall Adopt-A-Highway Cleanup	Florence Junction	8:00 AM Flo. Junct. near radio tower
Sat. Nov. 8	Beginners Lab LUNAR ECLIPSE	Dave Coshows' home	7:00 PM Setup
Wed. Nov. 12	General Meeting	SCC - PS 172	7:30 PM Guest Speaker - TBA
Thur. Nov. 13	SCC Star Party	SCC Parking Lot	7:00 PM Setup
Fri. Nov. 14	Public Star Party	Gilbert Library	7:00 PM Setup
Mon. Nov. 17	LEONID METEOR SHOWERS		
Sat. Nov. 22	Deep Sky Star Party	Vekol Road Site	Sunset: 5:22 PM
Sat. Nov. 29	Local Star party	Boyce Thompson Arboretum	Sunset: 5:21 PM
		December Events	
Sat. Dec. 6	Beginners Lab	Dave Coshows' home	7:00 PM Setup
Wed. Dec. 10	General Meeting	SCC - PS 172	7:30 PM Guest Speaker - TBA
Fri. Dec. 12	Public Star Party	Gilbert Library	7:00 PM Setup
Sat. Dec. 20	Deep Sky Star Party	Vekol Road Site	Sunset: 5:24 PM
Sat. Dec. 27	Local Star party	Boyce Thompson Arboretum	Sunset: 5:28 PM

Fall Adopt-A-Highway Cleanup

By Martin Bonadio

It's time again to have some fun picking up trash! We have scheduled our semiannual cleanup of the EVAC Mile scheduled for Saturday, November 1st starting at 8:00 AM. Our task is to pick up trash from the shoulder of the highway to the right-of-way fence (State crews are responsible for the median dividing the highway). Look for a sign up sheet at the October monthly meeting, or call Martin and let him know you want to attend. For example, with 10 volunteers, we can finish by around 10:30am. We meet at Florence Junction (Intersection of Highway 60 and 79) on the north side in the far west corner of the parking lot (closest to the radio tower).

Please note that recent and ongoing construction in the area around our mile may hinder or change our clean-up approach. We'll discuss details when we meet the morning of November 1st. This past spring we were only able to clean the north side of the road. The south-side is now an entirely new section of highway

Your reward for helping will be a free **club-sponsored** lunch at the Village Inn in Apache Junction (our own Randy Peterson is the manager) following the cleanup! These cleanups have always been a great time. On every one someone manages to find a very **interesting** "treasure"! So, come out, get some exercise, and get to know each other in the daylight. As well, the conversations at lunch revolve around telescopes, telescopes, and more telescopes. Oh, and of course you can keep any of these treasures that you find if you **really** want to.

Hopefully, we'll have some first-timers. They need to know:

- Participants must be at least 12 years old and work in groups, facing oncoming traffic. Dress appropriately; long pants, sturdy shoes/boots, long sleeves and/or sun block, hat, and heavy GLOVES. Safety vests to be worn will be provided. Please bring some water too, as you'll work up a sweat.
- Pick up bags and other litter with caution-it could contain hazardous material, or be hiding a snake, etc.
- A stick with a nail or hook is recommended to use instead of your hands, while a large bucket cuts down trips to the trash bags.
- Few large objects are found out there, but if lifting one, keep your back as straight as possible, the object close to your body, and let your legs and arms do the work.
- Don't let anything surprise you-our fellow citizens dispose of everything imaginable along our roadsides. If anything looks odd or is really heavy, leave it alone! Note its location and we'll notify the State about it afterwards.
- When a trash bag becomes full, place it on the very edge of the pavement, not in the pullout lane.

As with any government program, there are a few requirements to complete before starting. One is a briefing from the cleanup coordinator, Martin immediately preceding the cleanup. The second is to sign the usual waiver for the State saying participants won't sue if something happens. The forms are kept on file so one signature covers you for all future cleanups.

Contact Martin at 480-570-7163 or email: mbonadio@cox.net if you want to help or have questions. Thank you.

The Ultimate Astro Quiz

Answers: 1. A), 2. D), 3. B), 4. A), 5. D), 6. D), 7. D), 8. D), 9. C), 10. D)



STARIZONA
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**5201 N. Oracle Rd.
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October Classified Ads.

Free Classified Ads (Wanted & For Sale)

Noncommercial advertisements for Astronomical equipment, books, computers, or software — Wanted or For Sale — will be accepted from current EVAC members.

Ads will be run on a “space available basis” and may be edited slightly to best fit the space. Ads should consist of a brief text description and must include a current member name and an evening phone number. You may include your email address if you wish. Ads will be run until canceled or until they have appeared in three issues of the newsletter (whichever occurs first). Ads will be “tagged” with the first issue in which they appear.

Ads can be emailed to: john-cathy@cox.net
(this address may change in the future)

or send by U.S. Mail to:

EVAC PO Box 2202

Mesa, AZ 85214

Please mark the subject line of the email or the envelope, “EVAC Newsletter Ad.”

For Sale (Aug.)

JMI NGC-Max Digital Setting Circles (Modified with current Tangent Instruments Firmware)

Includes:

1. NGC-Max computer
2. 2ea 4,096 step encoders
3. Encoder cables
4. User documentation

Asking \$225.00 (OBO) Or Best Offer

Contact Jim 480.554-8789 or james.t.waters@intel.com

For Sale (Aug.)

Meade Schmidt-Cassegrain (non-GPS) 8" f10 with the following Plossl eyepieces: 4mm, 6mm, 9mm, 15mm, 20mm, 25mm, 26mm, 40mm, plus a 2x Barlow Lens. Asking price: \$1400.

Contact Robert Smith (480) 641-8197

For Sale (Aug.)

Meade LX 200 10" F 10

Field tripod
Super Wedge
Polar alignment scope
2" diagonal w/1.25 adaptor
1.25 26mm eye piece
AC&DC power supply
12 volt battery
Heated dew shield
Scopesaver easy mount
Fiber Glass storage case
Owners manual
\$ 2400.00

Joe Goss 480-830-3851 K7JRG@cox.net

For Sale (September)

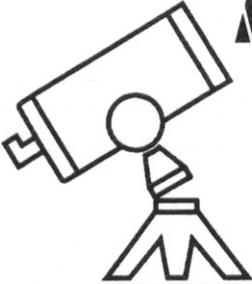
Meade 10-inch Dobsonian with modified (strengthened-plywood vs. particleboard) Dobsonian mount. Aprox 1.5 years old, hardly used. Complete with approx. 2-foot high extension platform for easier viewing; original 1.25-in. optics plus 2-in. adapter. Includes 2-in. Tele Vue 35mm Panoptic ocular and 2-in. Tele Vue Big Barlow (2X), solar filter (fits over front of tube), and Celestron sliding counterweight for precise balancing of tube with 2-in.(heavier) optics.

New = \$1650; asking \$1100 or best offer.

Zach Hilgers;480-838-1941; email: drz13@earthlink.net

For Sale (October)

5" GOTO SCT - F/10. Less than 1 year with heavy duty tripod and NexStar goto hand-controller. I have a JMI hard case (fits in airliner carry-on), 1-1/4 diagonal, 20mm Plossl, 1x finder, batteries, bobs knobs and power cord. I paid about \$1300 with shipping and accy's. The optics are great, and the scope does a great job tracking, slewing, and centering to objects once easily aligned. Scope is literally new and used only 4 times. I'll admit to using it last month for Mars observing, and enjoyed the views at over 200x. I'll sacrifice for \$800 or make a reasonable offer. That's a bargain!! Contact Info: Martin Bonadio (480-570-7163)



Mr. Telescope

Uptown Plaza Shopping Center
20 E. Camelback Road
Phoenix AZ 85012
602/955-5521
Jack Johnston

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The Ultimate Astro Quiz

-by Bill Peters

1. The two largest moons of this planet, as seen by an observer near the equator, would observe one moon rise in the east and set in the west, while the other moon rises in the west and sets in the east, even though both moons orbit the planet in the same direction. Name the planet.
A) Mars, B) Jupiter, C) Uranus, D) Neptune
2. The Moon is what ratio in size to the Earth?
A) One fourth, B) One eighth, C) One sixteenth, D) One fiftieth
3. Where would you weigh the most as measured on a standard scale?
A) Flying 450 mph at 35,000 ft from Los Angeles to Phoenix
B) Flying 450 mph at 35,000 ft from Phoenix to Los Angeles
C) At the airport in Phoenix
D) At the bottom of a 10,000 foot deep AZ mine shaft
4. On which planet could an equatorial observer see the sun rise in the east, then set in the east, rise again in the east, and finally set in the west?
A) Mercury, B) Venus, C) Uranus, D) Neptune
5. A spacecraft is in a stable orbit at 90 miles above the Earth. If a tower were built 90 miles high approximately how much would a 200 lb man, as measured at ground level, weigh on a standard scale at the top of the tower?
A) He'd be weightless, B) He'd weigh about 1 ounce, C) He'd weigh about 5 lbs, D) He'd weigh about 195 lbs
6. There are 16 planet sized objects in our solar system; the nine planets and seven moons (each of which is larger than at least one planet). Which planet or moon has an atmosphere most similar to Earth's in terms of composition and atmospheric pressure?
A) Mars, B) Venus, C) Europa, D) Titan
7. How does our Milky Way Galaxy compare in size to other galaxies?
A) It is smaller than most but not a dwarf, B) It is average, C) It is larger than most but not a giant, D) It is supersized
8. The sun actually travels through 13 constellations in the ecliptic in the course of a year. How many constellations does the Moon course through?
A) 15, B) 16, C) 17, D) 18
9. How many times does the Earth rotate in one year?
A) 364, B) 365, C) 366, D) once
10. What is the only planet where one could observe a total eclipse of the Sun caused by another planet?
A) Saturn, B) Uranus, C) Neptune, D) Pluto

Answers can be found elsewhere in this issue and the **detailed answers with explanations** will be published next month -- so make notes now, of any answers you disagree with.

Meanwhile, your score, rates as follows:

Zero out of 10 you've earned a Star on the Jay Leno Jaywalk All-stars. 1-2 correct welcome to the Art Bell Call of Fame. 3-5 you are a bona fide inductee into Men In Black! 6-8 you're a true Trekkie. 9- 10 you're a Supernova among the Pierre Schwar Superstars!

East Valley Astronomy Club Membership Form

Please complete this form and return it to the club treasurer at the next club meeting OR mail to EVAC, P.O. Box 2202, Mesa, AZ 85214, with a check or money order made payable to EVAC.

IMPORTANT: ALL memberships expire on December 31, of each year.

New Member Only - select month joining:

- \$20.00 January – March
- \$15.00 April – June
- \$10.00 July – September
- \$25.00 October – December & Next Year

Membership Renewals:

- \$20.00 January – December

Name Badges:

- \$7.00 each Name: _____

Magazines: if renewal, customer # _____

(New) (Renewal)

- \$29.00 /yr Astronomy Magazine
- \$30.00 /yr Sky & Telescope

Newsletter delivery option, check one:

- Email (saves club printing & postage) U.S. Mail

Total enclosed \$

Name: _____

Address: _____

Phone # () _____

Email: _____

URL: _____

Local Star Party Sites

1: Florence Junction Site

General Information: The Florence Junction site is one of the two official sites for the East Valley Astronomy Club's Local Star Parties, typically held on the Saturday closest to Last Quarter Moon. Florence Junction offers reasonably dark skies within a short drive of most East valley locations. EVAC's Land Use Permit #26-104528 applies to this site.

Location: N 33° 14' 40" W 111° 20' 16"

2: Boyce Thompson Arboretum Site

General Information: The Boyce Thompson site is still considered the new local site. Only a few Star Party have taken place there as a second local site, although EVAC members have held Star Parties there at the request of the Arboretum on a twice yearly basis. The site has some privacy advantages over the FJ site.

Location: N 33° 16' 52" W 111° 09' 35"

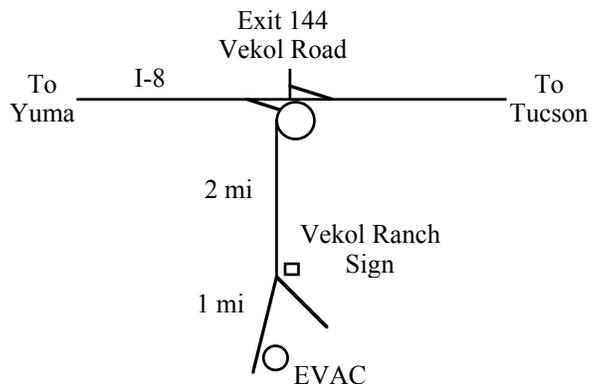
How to get there: Drive East on US 60 past Florence Junction for both sites. About 3.7 miles East of Florence Junction (after crossing railroad tracks) you will see a (second) flagpole on your right. Turning right (South) here and following the dirt road for 0.6 miles you will reach the FJ #1 site (marked by an old corral on your left). Continuing past the flagpole turn-off on US 60 and over Gonzales Pass will bring you to the Boyce Thompson Arboretum just before you enter the town of Superior. The Arboretum is marked with a large brown and white State Park Sign and there is a right turn lane.

Deep Sky Star Party: Vekol Road Site

General Information: The Vekol Road site is the official site for the East Valley Astronomy Club's Deep Sky Star Party, typically held on the Saturday closest to New Moon. Vekol Road offers dark skies despite prominent sky glow from Phoenix to the North. The site is within 90 minutes drive time from most East Valley locations.

Location: N 32° 47' 55" W 112° 15' 15"

How to get there: Take I-10 South and exit onto Maricopa Road. Continue through the town of Maricopa to SR 84, about 25 miles from I-10. Turn right on SR 84, after about 5 miles the road merges with I-8. Continue West and exit I-8 at Vekol Road-Exit #144. Turn left and cross the highway overpass. Before looping back onto I-8 take the small road (now paved) to the left. Go South for 2 miles. At the Vekol Ranch sign bear right and continue South for another mile until reaching a large open area on the left.



EVAC Officers

PRESIDENT

Peter Argenziano
(480) 633-7479

VICE PRESIDENT

Diana Jane
(480) 833-2002

TREASURER

Stanley Bronstein
(480) 922-3845

SECRETARY

Tom Polakis
(480) 967-1658

PROPERTIES

Gary Finnie
gfinnie@kam-az.com

NEWSLETTER

John Matthews
john-cathy@cox.net

COORDINATOR

Silvo Jaconelli
(480) 926-8529

East Valley Astronomy Club

EVAC Homepage: <http://www.eastvalleyastronomy.org/>

Membership & Subscriptions: \$20 per year, renewed in December. Reduced rates to *Sky & Telescope* and *Astronomy* available. Contact Stanley Bronstein. PO Box 2202 Mesa AZ 85214-2202.

Address Changes: Contact Stanley Bronstein. PO Box 2202 Mesa AZ 85214-2202

Club Meetings: Second Wednesday of every month at the Scottsdale Community College, 7:30 p.m. Meet in **either** Room PS 172 (Physical Science Bldg.) or SC 164 (Student Center Bldg.). See maps and meeting schedule on page 10. of this newsletter. •• **SAVE PAGE 10** ••

Newsletter: Email John Matthews at: john-cathy@cox.net The newsletter is mailed out the week before the monthly Club meeting. An electronic version is available in Adobe PDF format in lieu of the printed copy. Please send your contributions to John Matthews at: john-cathy@cox.net Contributions may be edited.

EVAC Library: The library contains a good assortment of books, downloaded imagery, and helpful guides. Contact Gary Finnie a: gfinnie@kam-az.com

Book Discounts: Kalmbach and Sky Publishing offer a 10% discount to EVAC members on books and other items from their catalog. When ordering, notify the person on the phone that you would like the "Club Discount." When ordering by mail, there is a line to subtract the club 10%.

EVAC Star Party Line: Let other members know in advance if you plan to attend a scheduled observing session. Contact Events Coordinator Howard Israel at (480 893 7523).



EVAC
PO Box 2202
Mesa, AZ 85214

EVAC Homepage:
www.eastvalleyastronomy.org

Reminders:

September EVAC Meeting **Wednesday, Sept. 10, 2003**

Location: Room PS - 172
Physical Science, (SCC) @ 7:30PM

October EVAC Meeting **Wednesday, Oct. 8, 2003**

Location: Room PS - 172
Physical Science, (SCC) @ 7:30PM