



# East Valley Astronomy Club

September 2003

www.eastvalleyastronomy.org

Scottsdale, Arizona

## September 2003



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## From the Desk of the President

by

**Peter Argenziano  
2003 EVAC President**

Just when I thought we weren't going to get any rain this season, the monsoon storms finally arrived. While putting a significant crimp in my observational activities, their onset has allowed me to catch up on some overdue reading. A couple of books I've been able to finish recently: *Understanding Variation: The Key to Managing Chaos* and *The Black Hole at the Center of Our Galaxy*. I've just started reading *Seeing in the Dark*.

When possible I have been, like most of you, gazing at Mars. So far, I have really been amazed with what I've seen through the eyepiece. Admittedly, I haven't been a very dedicated planetary observer in the past. Sure, I've spent some time with Jupiter and Saturn, but nothing that I would classify as observational dedication. But, the current Mars apparition has kindled an interest in the planets. What I've found to be quite valuable in my studies of the Red Planet is a Yahoo group devoted to observing Mars. The group is called, simply enough, *mars observers*. The 'Photos' section of this group is updated daily with images submitted by group members. The images, along with the text posts, help to explain features being observed. I find group membership both informative and entertaining, as do the other 1,000+ members. I recommend investigating this group, available at <http://groups.yahoo.com>.

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

Mars Watch in Gilbert	September 3 at 1930	Riparian Preserve
Mars Watch in Gilbert	September 5 at 1930	Riparian Preserve
Mars Watch at ASU	September 5 at 2100	AZ State University
Mars Watch at CAC	September 13 at 2000	Central AZ College (AJ)
Mars Watch in Gilbert	October 1 at 1930	Riparian Preserve
Mars Watch in Gilbert	October 3 at 1930	Riparian Preserve
Mars Watch in Gilbert	October 10 at 1930	Riparian Preserve

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

I'll be leaving for a much needed vacation a few days after our September meeting. In addition to attending a wedding and visiting with family and friends, I hope to get the chance to visit the nearly 800-year-old city of Torun. This is the birthplace of Mikolaj Kopernik (1473 – 1543), better known to us in the west as Nicholas Copernicus. Copernicus is credited with the development of a heliocentric (Sun-centered) model of the Universe. He became fascinated with Ptolemy's geocentric model while studying in Italy, then at the very heart of the new astronomy. Upon returning to Poland in 1503 he began writing *De Revolutionibus Orbium Coelestium* (On the Revolution of the Celestial Spheres), but it would not be published until he lay on his deathbed four decades later.

At this point in time observational astronomy was concentrated on making accurate positional measurements using mathematical instruments. Copernicus' first recorded observation was a lunar occultation of Aldebaran in Bologna, Italy on March 9, 1497. He was using the star to investigate the orbit of the Moon. It was this type of research that caused him

contd. from p.1

to question the complicated epicycles and equants necessary to make the geocentric model function properly. Although his heliocentric theory was geometrically elegant, he feared that science would be adversely affected by its release. Being somewhat conservative, he did not wish to publicly challenge the teachings of Aristotle, Philolaus, Aristarchus and Ptolemy.

Moving forward a few centuries, I'd like to remind everyone of the upcoming EVAC elections. In last month's newsletter I inadvertently omitted two of our Board members: Mort Hanlon and Randy Peterson – both are eligible for reelection in 2004. This oversight was due to the fact that the club currently has seven Board positions, but will only have five in 2004.

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. Nominations for Officer or Board positions shall be announced at the October general meeting and shall be publicized in the club newsletter and on the club web site prior to the November general meeting.

I have decided to seek reelection as club President in 2004. Additionally, Joe Goss is seeking a term on the Board and Jason Nelson a second term as photographer.

So, I urge you to get involved. The club is only as good as you make it!

Keep looking up!

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**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 still the big show of the month.** The good news is that it is observable at a more convenient hour (before midnight) and that it won't be getting much smaller than its peak size. The bad news is that its surface might be obscured by global dust storms and that it will be getting a little smaller all the time. Here are the transit times, when it is highest in the sky:

<b>Date</b>	<b>Transit</b>
<b>9/1</b>	<b>12:18 AM</b>
<b>9/15</b>	<b>11:11 PM</b>
<b>9/30</b>	<b>10:08 PM</b>

On **Wednesday, September 10, about 11:20 PM** you can see an

asteroid close to a star. With a medium (6 inch) telescope look 30 degrees above the southeast horizon for **1 Ceti** (mag 6, RA 23h 58.4m, dec -15d 51'). The asteroid **354 Eleanora** (mag 11) will be 10 arcseconds above it. It's motion should be easily visible in 15 minutes.

On **Monday, September 22, about 5:15 AM** you can have an especially good view of the southwest limb of the Moon. With a small (3 inch) telescope look 30 degrees above the east horizon for the crescent Moon. Libration tips the lower right part of our satellite toward us. This is another chance to view the filled crater, Wargentín, which I described last month.

On **Wednesday, September 24, about 5:30 AM** you can see a loose grouping of objects. With your unaided eye look about 15 degrees above the east horizon for Jupiter (mag -2). Above it is the star Regulus (mag 1). Below it is the planet Mercury (mag 0). Off to the left is the thin crescent moon.

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**Our September Speaker:**  
**Dr. Fulvio Meli**

Our September speaker is Dr. Fulvio Melia. Dr. Melia is a Professor of Physics, and Astronomy (Ph.D., 1985, MIT) and Associate Department Head of the Department of Physics, at The University of Arizona, in Tucson. His overall research theme is the study of the physics of matter and radiation in the extreme conditions encountered near compact astrophysical objects, such as neutron stars and black holes. His main areas of current interest include the particle acceleration and radiative emission in Active Galactic Nuclei, the Galactic center, especially with regard to the massive black hole candidate Sgr A\*, electron-positron plasmas near the event horizon of Cygnus X-1-like objects, and accreting neutron stars and white dwarfs in binary stellar systems.

# The Backyard Astronomer

by  
Bill Dellenges

## Astronomy license plates

Let the world know you're an astronomy nut! Many, if not all states, offer personalized license plates for cars and motorcycles. In Arizona you can use up to seven characters, mixing numbers and letters if you wish. The cost is \$25 to order such a plate (you'll receive a set of 2 plates in about a month). Once you have it and your registration becomes due, you'll be charged \$25 each year in addition to whatever your regular registration fee is.

A personalized plate may be ordered at any time of the year. You can do this at a local MVD office or on the internet at [www.servicearizona.com](http://www.servicearizona.com). Click on "Personalized plate". You'll be asked to list three plate choices in order of preference. You won't know which was approved until you receive and open the plate mailer. The state reserves the right to deny a selection which may be offensive. A neat link here is "Personalized plate search page", where you can enter a proposed plate you have in mind and the computer will let you know if it's available! If ordering via the net, you will be charged an additional \$4 plus \$2.40 for mailing the plates to you. Credit cards are used at the site as a form of payment.

I think this is a really fun thing to do! In the past, I've had MRCOMET, UMBRA, GAZER, and NEBULA. I currently have STARGZR and OBAFGKM on my two cars. I noted some

choices that were already taken: STARMAN, COSMOS, BLKHOLE, PULSAR, STARS, STARRY, COSMIC, PARSEC, ORION, QUASAR, SYZYG, UMBRA, SIRIUS, E MC2, and STARNUT to name a few. All the planets are taken except Uranus, which I suspect the MVD folks have a problem with.

Some ideas I had which are still available: NEBULA, NEBULAE, MILKYWY, 61CYGNI, CANOPUS, IONTAIL, SIRIUSB, BIGBANG, ZODIAC, MOONMAN, X RAYS, SUN G2V, LIGHTYR, NOVA, NOVAE, SNTYPE1, AND 63240AU (GET IT? The # of A.U.'s in a light year).

Wouldn't it be cool if every car at a star party had an astronomy plate?

Postscript: In the July 2003 EVAC newsletter John Matthews quoted from Robert Burnham's classic *Celestial Handbook* the first 6 pages where he philosophizes about our beloved hobby. Looking at my battered copy, I see long ago I had underlined the passage. Thanks John, for reminding me about it! I'd like to add 2 points: 1) In my opinion, though somewhat dated in the astro-physics department, I feel no astronomy library is complete without this 3 volume set on their shelves. 2) A budding astronomer would do well to read the first 100 pages of volume one. In so doing, you'll gain a solid understanding of general astronomical principles and nomenclature, putting you 90% ahead of the game.

## Schedule of Events - August, September, October 2003

### East Valley Astronomy Club

by  
Howard Israel

<b>September</b>			
Wed. Sept. 10	General Meeting	SCC - PS-172	7:30 Speaker: Dr. Fulvio Melia-The Black Hole @ Center of Universe
Fri. Sept. 12	Public Star Party	Gilbert Library	7:00 PM Setup
Sat. Sept. 13	Beginners Lab	Dave Coshows' home	7:00 PM Setup
Sat. Sept. 20	Local Star Party	Boyce Thompson Arboretum	Sunset: 6:28 PM
Sat. Sept. 27	Deep Sky Star Party	Vekol Road Site	Sunset: 6:20 PM
<b>October</b>			
Wed. Oct. 1	Public Mars Observing	Riparian Preserve	7:30 - 10:30 PM Public viewing of Mars sponsored by EVAC
Fri. Oct. 3	Public Mars Observing	Riparian Preserve	7:30 - 10:30 PM Public viewing of Mars sponsored by EVAC
Wed. Oct 8	General Meeting	SCC - PS 172	7:30 PM Guest Speaker TBA
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
Fri. Oct 24	Begin All Arizona Star Party	Arizona city	Oct. 24 - 25 Sunset: 5:45 PM

## Mars Mania!

The Coconino Astronomical Society is hosting a free Mars Mania! viewing at Heritage Square (downtown Flagstaff) on Friday, September 5, from 8:00pm to 11:00pm. Members will be on hand with telescopes to share views of the red planet during its historic close approach to Earth. The following night, Bill Ferris is giving a talk titled, "The Great 2003 Mars Opposition," during the CAS September meeting. The meeting is in the Lowell Observatory Visitor Center and begins at 6:00pm. Weather permitting, CAS members will setup telescopes outside the Lowell Rotunda to share views of Mars with visitors to the observatory.

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## Pointe Resort Star & Mars Party

We have a fantastic opportunity to conduct a star party in September at the Pointe Resort at South Mountain. I have been contacted by McDonald Observatory (University of Texas at Austin) with a request to host a star party (to promote astronomy) at a conference of Public Radio Program Directors - the people who make decisions on what programs are broadcast nationally.

McDonald Observatory produces such a radio program, called StarDate. This feature is broadcast on public and commercial radios stations across the nation.

The conference is scheduled for September 10 - 13. Our monthly meeting is on the 10th (Wednesday). SAC's meeting is on the 12th (Friday). We are hosting a Mars Watch in Apache Junction on the 13th (Saturday). That leaves the 11th (Thursday) with nothing already scheduled.

We have not finalized a date yet. Friday or Saturday seem ideal at first, but remember that this is a group of program directors from across the US - so attending a star party might not be their first choice for a weekend activity. At this point I do not know how large a crowd we're talking about either.

The tentative plan is to have someone, hopefully Howard, give a short presentation - followed by a star party for a couple of hours. Probably start around 7:30 and go until 11:00... something like that. The Moon is full on the 10th, so on the 11th it will be a waning gibbous with 99% disk illumination. Not ideal for a star party, but we'll be in town anyway. On the 11th Mars will still be 24" in size, rising just past 6:00 PM and culminating at about 11:30.

Once it's 'nailed down' I'll officially solicit participants. But, on the limited information I've provided here: who's interested in participating?

Find out more about McDonald Observatory here:  
<http://mcdonaldobservatory.org>

and StarDate here: <http://stardate.org/>

Keep looking up,

Peter Argenziano  
President  
East Valley Astronomy Club  
[www.eastvalleyastronomy.org](http://www.eastvalleyastronomy.org)

## Mars Tides!

These next two weeks Mars will cause Earth tides of up to an extra 4 cm (1.75 inches) at Rocky Point, Mexico and 6 cm (2 inches) at the Bay of Fundy, in eastern Canada. Now that Mars is at record close approach to Earth you may be interested to know that Mars has a subtle tidal effect on the Earth. Tides are caused by the differing gravitational strength on the near, center, and far sides of the Earth. Generally each day, ocean tides are highest on Earth's near and far sides and lowest at the middle distance from a celestial body. The Moon causes the greatest tides because it is so close, only 383,000 km (238,000 miles) away. The Sun also causes significant tides because of its greater mass.

On Earth, where there are large closed bays to funnel water, tides can become quite high. Two prime examples are the Gulf of Baja California in Mexico, where Rocky Point is a common destination of Arizonans and the Bay of Fundy, Canada. Mars will cause the greatest tidal effect at these locations as well. At the Bay of Fundy when the Moon is New or Full combined tides with the Sun can reach 13.71 m (45 ft). August 27th, was New Moon AND Mars was closest to the Earth; the tide should have reached 13.77m 45 ft 2 in!

The Mars, Moon, Sun tidal pull should also be at its greatest in 59,619 years. In fact, unless the Moon was New or Full exactly on the date of Mars' closest approach 59,619 years ago this record tidal effect may be many thousands of years longer.

The planet Venus also causes significant Earth tides when it is at its inferior conjunction distances of 38,000,000 to 42,000,000 km (24,000,000 - 26,000,000 miles). At the Bay of Fundy tides can be an additional 12 cm (5 in).

Bill Peters

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**STARIZONA**  
ADVENTURES IN ASTRONOMY & NATURE

**5201 N. Oracle Rd.  
Tucson, AZ 85704  
(520) 292-5010**

## September 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](mailto: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 (July)

**Astro Physics 800** mount w/3, 9lb. counterweights and cases.

**Meade ETX 125** with AutoStar, Star Pionter & JMI foam Case.

Call for price & details.

Eron Lee

(602) 740-3489

### 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](mailto: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](mailto: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](mailto:drz13@earthlink.net)



# Mr. Telescope

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

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800 574-2589

E-MAIL AT WEB SITE  
<http://www.photoninstrument.com>

# 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 now 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"

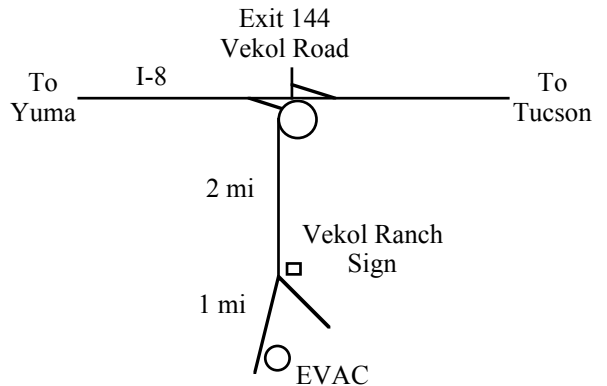
**How to get there:** Drive East on US 60 past Florence Junction for both sites. About 3.7 miles East of Florence Junction (after crossing railroad tracks) you will see a (second) flagpole on your right. Turning right (South) here and following the dirt road for 0.6 miles you will reach the FJ #1 site (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](http://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