East Valley Astronomy Club

August 2004 www.eastvalleyastronomy.org Scottsdale, Arizona

August 2004

Contents

From the Desk of the President
by
Peter Argenziano
2004 EVAC President

Now that we are in the midst of the monsoon season, we all need to find other activities to fill our 'telescope time'. For many of us, this presents a time to catch up on another nighttime activity: sleeping. For others the monsoon season coincides with 'Honey-Do' season. Others take the opportunity to clean their optics, possibly getting them refigured and recoated. I'd like to propose a few other activities in which you may get involved.

The first is the upcoming EVAC elections. 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. All nominations will be announced at the October meeting, as well as being published on the website and in the newsletter. Voting will occur at the November meeting for terms beginning on 1 January, 2005.

While any position may be contested, we have a definite need to fill many positions in 2005. Some Officers have indicated that they will seek a second term, while others are subject to term limit constraints. Following is a list of positions which must be filled for next year:

- President
- Vice President
- Treasurer
- Newsletter Editor
- Events Coordinator
- Board Member

As you can see, some vital positions need to be filled, for without volunteers there is no club. If you are interested in one of these positions, I urge you to contact the person currently serving in that capacity for complete details of the roles and responsibilities. You can also learn details by reading the club's Constitution and Bylaws, which are published here:
http://www.eastvalleyastronomy.org/bylaws.html

A listing of 2004 and 2005 governing body positions is available here:
http://www.eastvalleyastronomy.org/05elect

The dynamics of any organization, and EVAC is certainly no exception, usually indicate that a small percentage of the membership ever take an active role in its governance. We've all seen it: the same handful of people continues to do the work, while others sit idly by, content to let others run the show. I may be overly optimistic, but I'd like to see a paradigm shift away from the status quo. Is this the year you take an active role in the East Valley Astronomy Club? I urge you to get involved. The club is only as good as you make it!

On Friday evening, the 13th of August, the Rotary Observatory Advisory Committee will hold a meeting to discuss the dome and telescope acquisition process. The meeting begins at 6:30 PM at the Southeast Regional Library in Gilbert (southeast corner of Greenfield and Guadalupe

contd. on p.2

contd. from p.1

Roads). The agenda consists of two items: discussions centered on acquisition recommendations for the observatory dome, and if time allows, the primary telescope. Hope to see you there.

As we look ahead to the end of summer, 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 15th and 16th at Farnsworth Ranch (south of Arizona City). The site is the same one used for the annual Messier Marathon.

This year's event actually begins on Thursday evening (October 14th) at the Arizona Science Center in downtown Phoenix. This is the revised date and location for the October general meeting, and we are quite pleased to have none other than noted author Phil Harrington as our guest speaker. Many of you are, no doubt, familiar with Phil's books – Star Ware; Star Watch; Touring the Universe through Binoculars; Astronomy for All Ages; The Deep Sky: An Introduction; and others – or his work as an associate editor and contributor for Astronomy magazine, or for his Talking Telescopes internet discussion forum. This is an event you don't want to miss!

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 2004 All-AZ Star Party are available here: http://www.eastvalleyastronomy.org/aasp.htm

Keep looking up!

If it's clear...
by Fulton Wright, Jr.
Prescott Astronomy Club -- August 2004

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 arc minutes in diameter. All times are Mountain Standard Time unless otherwise noted.

On Monday, August 2, after 10:00 PM (the later, the better) you can see the (terrestrial) northeast part of the **Moon** at its best. With a small (3 inch) telescope look for the just-past-full Moon. (You can't miss it.) The upper part of the Moon is tipped toward us by libration. The next night should also be good. If you miss these two nights, the Moon repeats this performance on **August 30 and 31**

On Wednesday & Thursday, August 11 & 12, you might see some **Perseid meteors.** Some scientists are predicting a better than average display this year. To observe, get to a dark site with a low horizon, bundle up, lie down facing northeast, look straight up (the meteors can appear anywhere in the sky). Here are some times to consider:
8:30 PM dark enough to see some, but the radiant is low, so not the best show yet.
12:00 AM radiant 25 degrees up, getting good.
2:20 AM moon rises, 12% illuminated, a little interference, radiant 45 degrees up.
4:00 AM broad peak of activity expected, radiant 60 degrees up.
4:30 AM dawn begins to intrude.

On Tuesday, August 17, about 7:45 PM, you might be able to see **Jupiter** and the 2 day old **Moon** near each other. With binoculars look 8 degrees above due west for Jupiter (mag -2) and, 3.5 degrees to the right, the thin crescent Moon.

On Monday, August 30, the **Moon** repeats its libration performance (see August 2 above).

On Tuesday, August 31, about 5:00 AM, you can see two planets near each other. With your unaided eye or binoculars look 30 degrees above the east horizon for Venus (mag -4) and, 2 degrees to the left, Saturn (mag 0).

Waiting for Cassini's "Safe Arrival" Call

The evening of June 30, 2004, was nail-biting time at Cassini Mission Control. After a seven-year journey that included gravity assist flybys of Venus, Earth, and Jupiter, Cassini had finally arrived at Saturn. A 96-minute burn of its main engine would slow it down enough to be captured into orbit by Saturn's powerful gravitational field. Too short a burn and Cassini would keep going toward the outer reaches of the solar system. Too long a burn and the orbit would be too close and fuel reserves exhausted.

According to Dave Doody, a Cassini Mission Controller at the Jet Propulsion Laboratory (JPL) in Pasadena, California, there was a good chance the Earth-bound Cassini crew would have to wait hours to learn whether or not the burn was successful. Of the three spacecraft-tracking Deep Space Network (DSN) complexes around the globe, the complex in Canberra, Australia, was in line to receive Cassini's signal shortly after the beginning of the burn. However, winds of up to 90 kilometers per hour had been forecast. In such winds, the DSN's huge dish antennas must be locked into position pointed straight up and cannot be used to track a tiny spacecraft a billion miles away as Earth turns on its axis. "The winds never came," notes Doody.

The DSN complex at Goldstone, California, was tracking the carrier signal from Cassini's low-gain antenna (LGA) when the telltale Doppler shift in the LGA signal was seen, indicating the sudden deceleration of the spacecraft from the successful ignition of the main engine. Soon thereafter, however, Goldstone rotated out of range and Canberra took the watch.

After completion of the burn, Cassini was programmed to make a 20-second "call home" using its high-gain antenna (HGA). Although this HGA signal would contain detailed data on the health of the spacecraft, mission controllers would consider it a bonus if any of that data were actually captured. Mostly, they just wanted to see the increase in signal strength to show the HGA was pointed toward Earth and be able to determine the spacecraft's speed from the Doppler data. If possible, they also wanted to try to lock onto the signal with DSN's closed-loop receiver, a necessary step for extracting engineering data.

Normally it takes around one minute to establish a lock on the HGA signal once a DSN station rotates into range. Having only 20 second's worth of signal to work with, the DSN not only established a lock within just a few seconds, but extracted a considerable amount of telemetry during the remaining seconds.
"The DSN people bent over backwards to get a lock on that telemetry signal. And they weren't just depending on the technology. They really know how to get flawless performance out of it. They were awesome," remarks Doody.

Find out more about the DSN from JPL's popular training document for mission controllers, Basics of Space Flight (www.jpl.nasa.gov/basics) and the DSN website at deepspace.jpl.nasa.gov/dsn. For details of the Cassini Saturn orbit insertion, see www.jpl.nasa.gov/basics/soi. Kids can check out The Space Place at spaceplace.nasa.gov/en/kids/dsn_fact1.shtml to learn about the amazing ability of the DSN antennas to detect the tiniest spacecraft signals.

This article was written by Diane K. Fisher. It was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Editor's note: see related picture on p. 5

Backyard Astronomer

By Bill Dellinges (6/04)

Conquer Sagittarius

There are more Messier objects (15) in Sagittarius than any other constellation. Does this Messier maze intimidate you? All those objects used to confuse me until one night when I decided to attack this area and master it, once and for all. Well, "master it" may be too strong a phrase. I did find all the M objects that night, but I must confess I still need a brush up course each summer after having not seen the area in a year – but I think I've got a good handle on most of its objects.

I have a map and method in my mind to help me find my way through the Archer's M objects. I categorize them into four "zones". Let me share them with you. What follows is more of a plan to locate the objects rather than their description (this assumes of course you don't have a GOTO telescope!).

Zone One: Let's start by knocking off the five forgettable globular star clusters at the bottom of Sagittarius (west to east): **M69, 70** (where comet Hale-Bopp was found in 1995), **54**, **55,** and **75**. Note there is a convenient numerical order here running eastward: M69, M70. Then M54, M55, and M75. We'll use this little gimmick to help us elsewhere.

Start with M69 and work your way east through M70 and M54. Of these, M54 is the most impressive, resolvable in an 8". Recently I looked for these Globulars with tripod mounted 8x50 binoculars at an 8000' site. Except for M55, I could BARELY see them. So I suggest you point your finder where they're suppose to be and sweep a little till you find them. The best of the bunch is M55 which can be seen in an 8x50 finder and resolved in an 8" scope. The others look like a faint Virgo galaxy. Two tips: Sigma and Tau Sagittarius point southeast directly at M55. For M75 which hugs Capricornus, use its stars, Pie and Sigma Capricorni to point you southwest towards M75.

We're home free now.

Zone Two: Most gazers see Sagittarius as the "Teapot". With that in mind, you'll find the remaining M objects north of this Teapot. The next five M objects are bunched together along the top of the Teapot running horizontally (just like the Globulars discussed above). With the exception of M24, a huge Milky Way star cloud (more on this object later), **M8** – the Lagoon nebula – is the most prominent naked eye M object in Sagittarius. M8 shall be our reference point for the following five objects. Looking like a piece of detached Milky Way, M8 can be found due north of Gamma Sagittarii, or west of Lambda Sagittarii. It's a two–for–one object, a nebula and open star cluster. The cluster is NGC 6530 but I think most observers lump the two objects together as M8. Just one or two degrees north of M8 your finder will pick up another fuzzy spot. This will be **M20**, the Trifid Nebula. On its northeast corner is the open star cluster **M21**. Note we went from M8, to M20, to M21, a small distance south to north in numerical order. Now we must turn east to pick up two globular star clusters, **M22** and **28**. I wish they too were in order but they're not! Rats! Here I cheat a little by suggesting we shoot across M28 to M22 then back west to M28 in the interest of keeping our numerical order trick going. Will you allow me this license? By the way, M22 is a knockout. M28 is lackluster.

Zone Three: North of Mu Sagittarii lies **M24**. The Small Sagittarius Star Cloud dominates the three M objects in this zone. Unlike most M objects, this is simply a huge chunk of Milky Way. Here we have a nice west to east alignment of **M23**, M24, and **M25**. M23 and M25 are open star clusters and reside about three degrees west and east of M24.

Zone Four: In a finder or binoculars, just to the northeast of M24, you'll spot a small blob or knot of light. This is the open star cluster **M18.** Slide another degree or so northeast (notice we're running up at a slant here, not horizontally as in zones 1-3) and you'll sweep up a bright nebulous object. You have arrived at the famous Swan Nebula, **M17** (also known as the Check mark and Omega Nebula). In my opinion, only M42 and M8 beat this guy insofar as emission nebulae are concerned.

Hey, we're done! We have just run through all 15 Messier objects in Sagittarius. But may I add something before dismissing class? I get so eager to scoop up goodies in this area of the sky, that after M17 I continue north and see another nearby blob just northeast of the Swan. I can't help it, it's just THERE. This would be M16, actually just across the border in Serpens Cauda. It was within this nebula, that the Hubble Space Telescope took the famous "Pillars of Creation" image. If we include this object with M17 and M18, note how nicely we have the numbers 16, 17, and 18 running southwest!

Some night when Sagittarius is on the meridian, earmark a special time to use the above exercise to befriend and familiarize yourself with the location of Sagittarius' many splendors.

August Classified Ads.

Free Classified Ads
(Wanted & For Sale)

Noncommercial advertisements for Scopes or 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 are "tagged" with the first issue in which they appeared.**

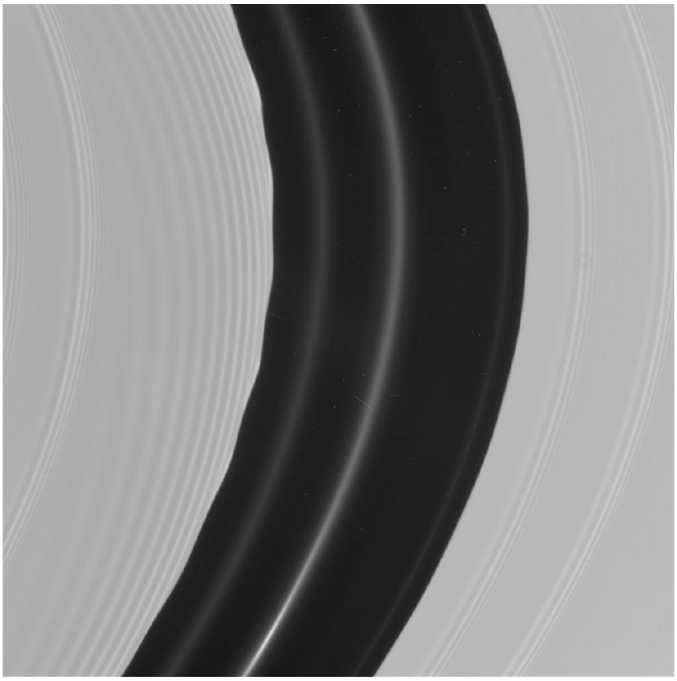
Ads can be emailed to: john-cathy@cox.net
(this address may change in the future)
or send by U.S. Mail to:
EVAC PO Box 2202
Mesa, AZ 85214
Please mark the subject line of the email or the envelope, "EVAC Newsletter Ad."

Dobsonian Scope for Sale (Aug)

8" Discovery Dob.
Custom Aluminum Bearing Wheels
DX-3 Crayford Focuser
Two finders: Quick Release Rigel & 8 X 50 Meade
Kendrick dew (or light) shield
ProStar secondary mirror mount
Many extras and special features -- call for details

$650

Contact: Jerry Fryer @ (480) 990-7701



Editor's note: The Encke Gap in Saturn's rings
See the related story on p. 3

Astro-Imaging Group Forming In Fall
Howard Israel

All indications point to a surge of interest in CCD imaging among amateur astronomers using digital cameras, as well as dedicated astronomical CCD devices. Based on the great images provided by acknowledged experts like Chris Schur and Tom Polakis, many EVAC members look on these works with great envy; wishing they could in some small measure, duplicate these images. Toward that end, your East Valley Astronomy Club will begin an Astro-Imaging User Group this fall.

The purpose of the group will be to call upon experts in the club to share their experience and expertise in astro-imaging using a wealth of different software and equipment including web and digital cameras and astronomical CCD imaging devices.

Planned are beginners' labs, workshops, field trips and extensive use of our web site to share experiences and images obtained through the User Group. Stay tuned for further information upon the conclusion of the monsoon season.

	AUGUST	EVENTS	
Saturday Aug. 7	Local Star Party	Boyce Thompson	Sunset at 7:22 PM
Wednesday Aug. 11	General Meeting	SCC PS-172	7:30 PM – Show-n-Tell
Friday Aug. 13	Public Star Party	Gilbert Library	7:30 PM Setup
Saturday Aug. 14	Deep Sky Star Party	Vekol Road	Sunset at 7:15 PM
	SEPTEMBER	**EVENTS**	
Saturday Sept. 4	Local Star Party	Boyce Thompson	Sunset at 6:45 PM
Wednesday Sept. 8	General Meeting	SCC PS-172	7:30 PM – Tony Hallas
Friday Sept. 10	Public Star Party	Gilbert Library	7:30 PM Setup
Saturday Sept. 11	Deep Sky Star Party	Vekol Road	Sunset at 6:38 PM
	OCTOBER	**EVENTS**	
Friday Oct. 8	Public Star Party	Gilbert Library	7:00 PM Setup
Saturday Oct. 9	Local Star Party	Boyce Thompson	Sunset at 5:58 PM
Thursday Oct. 14	General Meeting	AZ Science Center	7:30 PM – Phil Harrington
Friday Oct. 15	All-AZ Star Party	Farnsworth Ranch	Sunset at 5:53 PM

A hopeful Howard at this year's Messier Marathon

Backyard Astronomer

Return to Sunglow Ranch

Bill Dellinges (4/04)

In March of 2003 I visited Sunglow Ranch and wrote of my experience in an EVAC article in the May 2003 newsletter (I believe). I said, "I'll be back." So it was, that I booked a two night stay in April, 2004.

The ranch is about 225 miles southeast of Apache Junction via U.S. 60/70/191 to Safford and Willcox. It is about 45 miles south of Willcox. The site's elevation is 5,300' and sits on 400 acres. The night sky is pretty dark as you'd expect at this isolated location. Darker sites may be had at the Grand Canyon, Jack Newton's Arizona Village (Portal, AZ) or perhaps New Mexico Skies Guest Observatory. As noted last year, I could again spot the Zodiacal Light rising up to Gemini. This year, however, Venus' brightness dimmed this shaft of light somewhat. All the stars in Ursa Minor could be seen with direct vision. M44, Mel 111 (C. Ber. Cluster) jumped out at me; I could see many separate stars in those clusters without optical aid. The M46/47 clusters were faintly visible naked eye objects. The seeing was poor on the one night I observed. I can't say what the seeing typically might be at this site. Due south there is a small light dome generated by Douglas, perhaps ten degrees high which I did not find to be a problem. I don't believe it had grown much since my previous visit. Unlike last year, there was a general brightness of the atmosphere, about twenty degrees high, running 360 degrees around the horizon. It seemed like light pollution from cities but I don't think that was its source, since this area is not surrounded by cities. I had seen this phenomenon before on one night at my stay at New Mexico Skies Guest Observatory and was curious as to why one night would show dark skies down to the horizon, and another wouldn't (the night sky tends to be brighter near the horizon – for whatever reason-but this was a brighter than usual effect). Perhaps an EVAC member can explain this effect to this humble stargazer (?).

There are still three 12'x12' cement pads with power for amateur's scopes - a nice touch provided by the ranch. There is, however, still the problem of light pollution from the ranch buildings north of these pads. Sometimes management turns out the walkway lights early, sometimes not. That still leaves light coming at you from the casitas' windows, should they be occupied. Usually by 10 P.M. all the lights are out, so late night-owls are then in pig heaven.

The rates have gone up $20 since last year. A room now runs $139 for a single; add $62 dollars for the second person. Be advised the rooms have no telephone or TV. The good news is that these rates INCLUDE breakfast, afternoon tea, dinner, taxes, and gratuities. Still, $201 per night for two people is not exactly cheap, so I restricted our stay to two nights – the price of one high end eyepiece.

The irrepressible manager, Susan Nunn, is still going strong. She can be found - almost anywhere, any time - running from one job to another in an attempt to keep everything functioning and catering to the requests of guests (ask her to turn the lights out early!). On this visit, I had a better chance to note that the ranch is a more "Mom and Pop" type operation than I previously realized. At any given time, there are only 3-4 employees on duty. The drought has taken its toll on their well. One day a huge water truck made five trips to replenish the water storage tank.

This is a special place. The first word that comes to mind about Sunglow Ranch is TRANQUILITY. If you need to air out your head, get in a little stargazing, hiking and birding, give this place a try.

Call: 1 (520) 824-3334 or 1 (866) 786-4569.
Or, on the web at: http://www.sunglowranch.com/

P.S.: Don't forget, Chiricahua National Monument is only 15 miles north of the ranch. This is one of the best kept secrets in Arizona; the rock formations are spectacular.

NOTICE NOTICE NOTICE

from the Editor

This newsletter is written and published by and for the members of the East Valley Astronomy Club. ALL astronomy, space or telescope related items are welcome and will be considered for publication. If you have an article, a picture or even some astronomical humor -- you can contribute it to fill an otherwise blank space. And thus avoid preachy pleas -- like this one -- from your editor. Letters to the editor, related to club interests are also welcome and will be published, depending on space available.

Your Tip Counts!

By Martin Bonadio

We have an exciting night planned for our upcoming September 2004 EVAC general meeting. So special, we are calling it the "Night of 100 Tips". And we need your help. Our goal is to put together a presentation that encompasses tips from our members. Those tips will be compiled into a keepsake newsletter article pullout, emblazoned on our club website, and the focus of a presentation during that month's general meeting.

What's exciting is that each of you has the chance to become a featured guest speaker! All we need is your tip. Share with the club one or two observational, planning, telescope, or related item. The more tips the merrier, as everyone will be able to benefit from them. During the presentation numerous tips will be presented along with credit (if desired). We'll try to share as many tips as we can that night! Wow!

We are also making final plans to host a first ever beginners workshop in the SCC planetarium from 6:30 – 7:30pm, September 8th (before the meeting). Once finalized, there will be a sign-up sheet for up to 30 people. At the workshop a presentation on learning the night sky will be followed by host EVAC members sharing with you tips on telescope and eyepiece selection, star charting, and other beginner topics. If successful the beginner's workshop will possibly become a quarterly event for EVAC meetings!

I'm excited about this upcoming meeting, and I hope you will share your tips with us! Everyone's tip counts! You can email your tip to Martin Bonadio at mbonadio@cox.net. A form will soon be placed on the club website where tips can also be submitted electronically. Feel free to attach pictures or diagrams that you think are helpful. You can also fill in the space below and give it to Martin at any meeting between March and August.

Your Name	
Tip Title	
Tip	

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
( ) ( ) $32.00 /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"

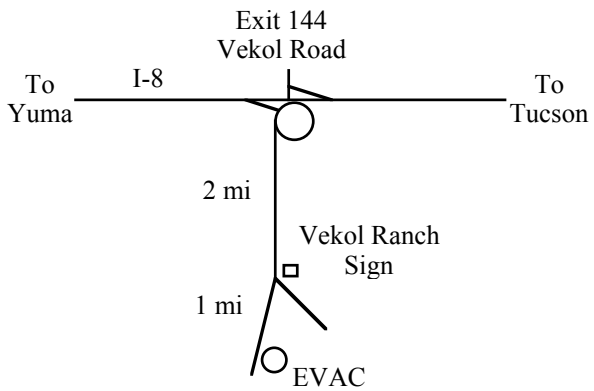
How to get there: Drive East on US 60 past Florence Junction for both sites. About 3.7 miles East of Florence Junction (after crossing railroad tracks) you will see a (second) flagpole on your right. Turning right (South) here and following the dirt road for 0.6 miles you will reach the FJ #1 site (marked 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
Martin Bonadio
(480) 926-4900

TREASURER
Jack McEnroe

SECRETARY
Diane Cook

EV. COORDINATOR
Howard Israel
(480) 893-7523

PROPERTIES
Dave Williams

NEWSLETTER
John Matthews
(602) 952-9808

WEB MASTER
Marty Pieczonka

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 the Treasurer:
Jack McEnroe at: keystoneconsulting@earthlink.net

Address Changes: Contact: Jack McEnroe. 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 Room PS 172 (Physical Science Bldg.).

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 Dave Williams at: davewilliams@cox.net
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).

East Valley Astronomy Club

EVAC
PO Box 2202
Mesa, AZ 85214

EVAC Homepage:
www.eastvalleyastronomy.org

Reminders:

August EVAC Meeting
Wednesday, Aug. 11, 2004
Location: Room PS – 172
Physical Science, (SCC) @ 7:30PM

September EVAC Meeting
Wednesday, Sept. 8, 2004
Location: Room PS – 172
Physical Science, (SCC) @ 7:30PM