East Valley Astronomy Club

October 2002 www.eastvalleyastronomy.org **Scottsdale, Arizona**

Fall Adopt-A-Highway Cleanup

By Martin Bonadio

I cannot believe that October is almost upon us. It's my favorite season because it means that I endured another summer full of monsoons, and it always turns out to be the month I do the most observing. I like that it gets darker earlier, and that the fall nights are mild. The summer triangle is still a good target if you get started early, and if you stay late enough you get rewarded with Orion and the rising planets this fall!!

I'll be out of the country for most of October, but am planning to attend a star party before leaving, and then do the Boyce Thompson Star Party when I return. Too bad I'll miss the All-Arizona on the 4th and 5th, it is always a blast! I also know we have a few other events planned too, like the SCC Star Party and the Adopt-a-highway cleanup effort on October 26th. Wow! We'll stay busy. In October there will be a show-and-tell meeting so bring all your new equipment and astrophotos to the meeting and share with each other.

Starting around the first of the year when I'm bored, having no presidential duties, I plan on organizing and keeping a few active SIG's (Special Interest Groups) going. I've really had some interest in a double star SIG that focuses on finding and reporting to the club newsletter and meetings

See ***President*** cont'd on Page 2

EVAC EVENTS CALENDAR - 2002

	New Moon	Meeting	< -- Members only -- > Local	Deep Sky	Gilbert	Other Events	Club Meeting Speaker
Oct	10/6	10/9	9/28	10/5	10/11	Oct 4&5 All AZ Star Pty 10/4 Riparian Star Pty Power 10/10 Ranch Paid Star Party 10/26 **Adopt A Hwy**	Show & Tell Night
Nov	11/4	11/13	10/26	11/2	11/8	11/2 Boyce Thompson 11/5 SCC Star party	
Dec	12/4	12/11	11/23	11/30	12/13	Holiday Party	

NOTE : The Local and Deep Sky parties are for members and by invitation only.
The public are welcome to attend the Gilbert Star Parties which are held at the Gilbert Library at Greenfield/Guadalupe, and which start at dusk on the dates shown.

Events for October & November

Oct 4 & 5 All-Arizona Star Party
Oct 4, Riparian star party for Home School children in Gilbert.
Oct 10 Power Ranch paid Star Party - Telescope volunteers needed.
Oct 26 8 AM – Adopt-A-Highway Cleanup
Nov 2 Boyce Thompson Arboretum Star Party.
Nov 5 SCC Star Party

President cont'd from pg 1

interesting double pairs. The best thing is that this effort can be done from the backyard! I'm going to order an astrometric eyepiece for the effort. I think it would be fun to target a constellation every few months and highlight the top 20 or 30 doubles in it. The lists will be fun for our membership!

As it currently stands here is the list of nominations and volunteers for the 2003 officers and board of directors. We're getting closer to a full ballot and have some great names on the list! We just need a few more people to step up to some key positions that are important to club communication. The actual election and approval of positions will take place in November.

President –	Peter Argenziano	**Board:**
Vice President –	Diana Jane'	Howard Israel
Treasurer –	Stanley Bronstein	Laurice Dee
Properties –	Gary Finnie	Craig Dokken
Secretary –	Tom Polakis	Dave Hertel
Webmaster -	**<OPEN>**	Martin Bonadio
Web Developer –	Dave Kelley	Gene Lucas
Newsletter Editor -	**<OPEN>**	
Newsletter Coordinator –	Silvio Jaconelli	
Events Coordinator -	**< OPEN>**	

Finally, I wanted to report that the beginner's lab was excellent this past month. We had about 10-15 new members show up and we all had a good time learning about collimation, setting up our scopes, aligning with the North Star, and finding some common brighter deep-sky objects. I really enjoy these beginner's labs. The party almost came to a stop when the Tempe police showed up wanting to know what all the cars parked in the alley was all about. After taking a look through a few telescopes the officer bid us a great evening and went along her way! How funny!

If it's clear...

by Fulton Wright, Jr.
Prescott Astronomy Club
for October 2002

Shamelessly stolen information from Sky & Telescope magazine, Astronomy magazine, and anywhere else I can find data. When gauging distances, remember that the Moon is 1/2 a degree or 30 arcminutes in diameter.

On Thursday, September 26, (I know this is the wrong month but I just discovered this event. I hope you get this announcement in time.) at midnight, you can see an asteroid near a star. With a small (3 inch) telescope, look 40 degrees above the southeast horizon for 32 Ceti (mag 6.5) with 1 Ceres (mag 7.3) only 2 arcminutes above it.

On Sunday, October 5, at 4:20 AM, you can see two of Jupiter's moons close to each other. With a small (3 inch) telescope, look 30 degrees above the east horizon for Jupiter (mag -2). Europa and Io will be only 2 arcseconds apart.

On Sunday, October 5, at 5:50 AM, you can see three solar system objects near each other. With binoculars look very low in the east for Mercury (mag 1), Mars (mag 2) above it, and the thin crescent moon to its left. Mercury will continue to be visible for the next couple of weeks.

On Wednesday, October 9, from 1:30 AM (when Jupiter rises) till 2:51 AM you can see Callisto's shadow on the planet. Jupiter will be pretty low in the east, but you might be able to see this fairly rare event with a medium (6 inch) telescope.

See Pg 3 ***Clear...***

Clear... *Cont'd from Pg 2*

On Thursday, October 17, at 2:38 AM, you can see one of Jupiter's moons move partly behind another one. With a telescope look 20 degrees above the east horizon for Jupiter (mag -2). Below Jupiter, Europa partially occults Io. The event takes about 4 minutes. A small (3 inch) telescope will show two points of light merging. A larger telescope and steady skies might show more detail.

On Friday, October 18, at 4:29 AM, you can see two of Jupiter's moons close to each other. With a small (3 inch) telescope, look 40 degrees above the east horizon for Jupiter (mag -2). Ganymede and Io will be only 2 arcseconds apart.

On Saturday, October 26, at 3:49 AM, you can see Callisto move in front of Jupiter. With a small (3 inch) telescope look 40 degrees above the east horizon for Jupiter. 12 minutes later Europa disappears in Jupiter's shadow.

On Sunday, October 27, after about 8:00 PM, you can see an asteroid near a star. With binoculars look 30 degrees above the southeast horizon for Phi Ceti (mag 5). A quarter of a degree up and to the left will be 1 Ceres (mag 7.5). 6 degrees to the right will be 18 Melpomene (mag 8). Sky and Telescope for October 2002 has a good finder chart on p. 94.

On Tuesday, October 29, at 2:50 AM you can see Ganymede's shadow fall on Jupiter. With a medium (6 inch) telescope, look 30 degrees above the east horizon for Jupiter. 7 minutes later, Io disappears in Jupiter's shadow.

EVAC Meeting Minutes - September 11, 2002

Tom Polakis, Secretary

The meeting opened with announcements of openings for officers for 2003. These include Properties, Webmaster, and Newsletter Editor. Also, it is very important that we fill the President position for EVAC to continue.

In upcoming events, the EVAC Adopt-a-Highway will be October 26. Martin will be holding the holiday party, and is looking for volunteers. The club's electronic newsletter is being underutilized. Please consider switching to it if you are getting a mailed copy. It is EVAC's largest expense.

Pedro Jane' described a potential star party of undetermined date at Indian Hot Springs, near Mount Graham. This is a century-old hotel with five pools on 200 acres. If you're interested, please contact Pedro at pbj2017@qwest.net.

David Coshow described upcoming star parties. They include a paid star party at Power Ranch on October 10. Don Wrigley promoted the Boyce Thompson Arboretum star party, held on November 2. Also, the SCC star party will be held on November 5.

An EVAC 500 award went out to Joe Goss, who observed 500 deep-sky objects.

Laurice Dee mentioned that this is the 25th anniversary of the Voyager mission, and presented posters.

For show and tell, Rick Scott did a review of "The Hubble Atlas of Galaxies." Gary Nehenhuis demonstrated Sky View Cafe charting shareware.

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Minutes Cont'd from Page 3

The main speaker was Jim Klemaszewski from ASU. He spoke about the Galileo mission to Jupiter, with emphasis on surfaces of Jovian satellites such as Europa.

Tom Polakis
Tempe, AZ
Arizona Sky Pages
http://www.psiaz.com/polakis/

EXPERIENCES WITH THE PURCHASE OF A BINOCULAR VIEWER

By Silvio Janconelli

When I first got started in astronomy, I never suspected how diverse were the choices that existed for equipment selection. I can remember many years ago out at Florence Junction observing with Chris McFarlane, and while I was still struggling with the question of reflector versus refractor versus catadioptric, Chris was struggling with how to best achieve two-eye viewing. I must admit that I could not understand why he chose to pursue this particular avenue - it seemed like a lot of work and expense at the time.

As the years rolled by and I gained more familiarity with the equipment side of the hobby, I was picking up on a lot of discussions over binocular telescopes, large aperture binoculars, and binocular viewers. It began to dawn on me what it was that was driving Chris in the direction that he was heading - everyone who had mastered the techniques of two-eyed viewing (as you will read soon - yes - there is a lot to be mastered!) was most enthusiastic about the results. I felt that this was an area worth looking into.

The first category of two-eyed viewing (TEV) is binocular telescopes, where two separate telescopes have their independent light paths sent through two focusers, one for each eye. The ones that I have read about consist of two medium size reflectors. I confess that I never did delve into this much - I was reading about the expense involved, the problems with getting the separate images collimated at the eyepieces, the difficulties in slewing the pair of telescopes together across the sky - in short, all I read about were the problems in getting these units to work. I quickly abandoned any efforts in this direction.

Then one day I got into a big fight with my boss at work, and we spent the next several weeks avoiding each other. He showed up in my office one afternoon with a bonus check - his way of making up - which was enough to cover the cost of a pair of 4" Myauchi binoculars. Which is what I spent the money on! And this brings us to the second category of TEV. I must state that these units were first class - the sharpness and the views were simply incredible. Sunspots looked gorgeous through them, and the Moon was just as impressive. Some of my most memorable views of the Moon were to watch it rise in the east as it climbed over mountain ridges far off in the

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Binocular Continued from Page 4

horizon - all the main lunar features were resolved, and in front of these would be the cactus, bushes, rocky crags, etc silhouetted against the lunar backdrop. Marvelous! Asteroid tracking was a snap with these - with approximately a 3 degree field of view, it was easy to pan large areas of sky and pick up wide star fields - it was a lot of fun watching these large pieces of rock wend their way through the stars. And all Messier objects were easily visible through them - in fact, I would opine that this would be the easiest way to do a Messier Marathon. I ended up putting these on a large fork mount; as with telescopes, if these were not mounted properly, then they were basically unusable. Bill Dillenges also has a pair of Myauchi's, except he has the upgraded ED glass version, with interchangeable eyepieces.

After a few years, I was finding that I was not getting as much use out of these as I would have liked. The magnifications were limited to low powers (20x in this case), and I did not feel like spending a night in the desert restricted to 20x - the resolving power at this magnification is low. Also, with the fork mount, the set up was just as heavy and cumbersome as a telescope. Finally, I live in a town home complex, so I did not have the terrestrial views that would have enhanced the use of these. During this time, my good friend Chris McFarlane had bought a pair of 5" giant binoculars through mail order, based mainly on his experiences looking through my Myauchis, but he was very disappointed in the images that he had been getting - just as with telescopes, quality varies greatly from instrument to instrument. After some brief discussion, Chris returned his 5" binoculars and became the new owner of my Myauchis, and I went back to one-eyed viewing (OEV).

As my interests in astronomy shifted to Moon, Sun, planets and double stars - back yard objects - I again began to read about the advantages of TEV, especially when used in conjunction with refractors (by this time I had acquired a high-end 6" refractor). Almost all of the discussions on TEV centered around Binocular Viewers (BV) which somewhat resemble the head of a microscope that uses two eyepieces and fits into the drawtube of a telescope. Jim Gutman made an excellent presentation on these units a few months ago at one of our monthly meetings. For my birthday a year or so earlier, my wife had bought me a Takahashi Twin View BV which today retail for between $500 and $600; the images were superb, but there was one big drawback - the eyepiece holders were angled at 45 degrees and since my refractor drawtube was no more than 24 inches above the ground when the telescope was pointed overhead, I effectively lost use of the unit on any object higher than 70 degrees above the horizon - the prime area of the sky for Moon, Sun, planets and double stars! Oh no!!! Observing Jupiter made me have to choose between viewing it relatively low in the sky, or arching my spine backwards 60 degrees while groveling in the dirt! I took the unit over to Don Wrigley's place a few times and used it on his 6" refractor which sits about 6 feet above the ground - the unit worked great on his setup, and today Don now owns that unit!

I had already been doing a lot of research on 90 degree angled binocular viewers, and had narrowed the choice down to one of three units - Baader-Zeiss Astrophysics (most expensive), Tele Vue (mid price), and BW Optics (least expensive). The Baader Zeiss AP unit meant putting your name on a long waiting list (like most of the Astro Physics high end equipment) so I immediately did this while I tried to make up my mind which unit to go with. Then I got a real lucky break - Jim Gutman acquired several BVs for evaluation, including two of the three units that I was interested in - the Tele Vue and the BW Optics units! So I joined Jim out at Vekol and looked through some of his BVs. Here were my impressions at that point (without any hands-on experience with the Baader unit). Both units looked very cumbersome for refractors - they would have to use extension tubes between the BV and the 1¼inch diagonal. This made me concerned about flexure issues in the light path. Also the units would only work with a 2x Barlow, and no other magnification options. Talking with Al Nagler (he talked too much like a salesperson and I found it tough to get straight answers) and the BW Optics distributor (he did not seem all that knowledgeable) did not enhance my opinions. The only place where I was getting good advice and straight answers was from Roland Christen and from the Yahoo AP Users Group. Then the Baader AP BV arrived and I immediately was impressed!!!! The finish was immaculate, the unit was built to fit right into the focuser without any

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Binocular *Cont'd from pg 5*

extensions, it came with a custom-built, very low profile high quality 2" diagonal, and there were the options of using barlows of 1.25x, 1.7x, 2.4x and 3.2x. And the image quality was what you would expect from AP. All this plus excellent customer service!! I had previously tentatively agreed with Jim to sell him my AP unit and buy his BW unit, but within 24 hours of trying out the Baader BV I was on the telephone with Jim to ask him to let me renege on the deal!!

Well, what I have learned about BVs after all of this? Firstly, BV'ing is not a developed 'plug & play' proposition - a lot of trial and error is involved, and it is sometimes difficult to obtain reliable advice. So any aspiring BV'ers need to be prepared to learn as they go.

Secondly, your telescope will need either a lot of back focus; this is because the BV unit will add around 4 or 5 inches into the light path, so you will need to focus the scope inwards by a corresponding amount in order to compensate. There are two exceptions to this - SCTs do not have any problems because they focus by moving the primary mirror so they have an extremely wide range of focus; the other exception is when you use a Barlow - by their very nature Barlows throw the image far back, enough in most cases to allow the telescope to come to focus. The downside to this solution is that you lose low power wide field images with a Barlow. I have read nothing lately about using BVs with reflectors so I cannot comment except to say that many years ago when Chris McFarlane was trying to mate his BV to his reflector I seem to recollect that he had trouble getting the unit to work properly. Any reflector owner thinking of using a BV needs to tread very carefully.

Thirdly, there is the expense of owning duplicate sets of eyepieces - a pair of Nagler 3 -6 zoom eyepieces will set you back $800!! For my set up 1200 mm focal length using a Barlow, these Nagler zooms yield excessively high magnifications - there are no other 'click-stop' high quality zooms out there - so I must use various sets of fixed focus length eyepieces - a pricey proposition. This is where the AP Baader BVs have an advantage - there are several Barlow options available - 1.25x, 1.7x, 2.4x and 3.2x. So I set of eyepieces can yield four different image scales. And let me add that all BVs use only 11/4" eyepieces - 2" eyepieces will not fit BVs, though Jim Gutman tells me that one supplier has asked him to test out a BV prototype that uses 2" eyepieces.

That brings us to the fourth issue with BVs. Because you are using 2 separate light paths, there are all sorts of optical defects that become readily apparent. For example, each light path needs to be collimated just right, or else you will see double images. Also, the incoming light path needs to be centered exactly. And the prisms do tend to introduce some spherical & chromatic aberrations. For these reasons, Roland Christen strongly recommends the use of Barlows to get the required magnifications and to stick with medium power eyepieces, so that the magnification takes place BEFORE the light enters the prism sets. By the way, this is exactly the same advice that Tom Polakis recommends for OEV (one eyed viewing) because - among other things - it preserves the excellent eye relief that medium power eyepieces normally provide. The AP Baader BV has the edge over other BVs in that it has 4 different Barlow options as stated earlier.

Now let's talk a little about collimation. When I first tried out the AP BV, I had no difficulty merging the twin images for extended objects, but I was seeing double images of stars. Hmmm - 'out of collimation', I thought. After consulting with the AP Users Group on Yahoo, I discovered that the AP Baader unit is designed to allow for easy collimation adjustments; I do not think that other units offer this. Now a strange thing happened - before making any adjustments, I did a 'blink test' on Epsilon Lyrae at the edge of each eye's FOV and found that the images were in the same identical spot at the edge - that is, they were perfectly collimated - so why was I not able to merge the images - what the heck was going on??? Well, it was back to the AP users group. I got some interesting feedback. Firstly, the higher the magnification of the eyepieces, the more difficult it is to merge the two images - this was another reason given by Roland Christen to use Barlows rather than high power eyepieces; Roland suggested to use eyepieces no more powerful than 10 mm. Secondly, some people will never be able to merge separate images - why, I do not know - just a fact; so aspiring BV purchasers would do well to try before you buy. And thirdly (my problem), some people cannot merge

See ***Binocular*** *on pg 7*

perfectly collimated views, and instead the images need to be 'off' by a certain amount; there was a medical description for this condition, and I cannot remember it's name but it seems that I have it! So after getting the images on my AP BV to merge, I did a 'blink test' and sure enough the unit was now out of collimation! But the images were now perfectly merged (for me)!!!

Finally, most BVs have a smallish central prism, so there have been reports of some vignetting using low power wide-FOV eyepieces. The AP Baader unit employs over-sized prisms so vignetting is not an issue with them. For me personally, vignetting is not an issue because my targets (solar system) do not require wide FOVs. The question is debated as to how much darker do BVs make the image because they split the incoming light in half, and introduce a lot more glass into the light path. The conclusions of these discussions is usually that while some light does get lost, there is no *obvious discernible* loss of light at the eyepiece. My experiences support this, at least for the higher quality BVs. And as for *resolution*, there is no loss in resolution, regardless of any light loss.

So what is so great about the images through BVs that make them worth the time, trouble and expense? For me personally, there are several factors.

Firstly, there is the extra comfort of looking at objects as nature intended, using two eyes. Try using an eye patch over one eye for 15 minutes, and compare that to two-eyed viewing - the greater viewing comfort will be readily apparent.

Secondly, you will swear that BVs will double the image scale at the eyepiece. I got into lengthy discussions with both Art Ciampi of Texas Nautical and Marjorie Christen of AP on this topic - I was convinced that the BVs were introducing a 2x magnification factor since objects just looked so much bigger. But they both told me that there was no magnification increase. So one night me and Don Wrigley did some star drift tests and guess what - Art and Marjorie were right and I was wrong - our star drift tests revealed no increase in image scale!! So essentially we were getting *apparent magnification* of 300x with the image sharpness of 150x - the best of both worlds.

Next, one unfortunate consequence of the aging process is the incidence of 'eye floaters' (matter in our eyes that seem to float across the FOV at high powers) when one eyed viewing; these are very annoying when looking at planets and the Moon. The good news is that 'eye floaters' are not noticed with two-eyed viewing - they are compensated out of the signal processed by the brain.

One supposed effect of TEV is a stereo dimension to the view. I must confess that I have never really experienced this effect to any great extent. Given each individual's sensitivity to collimation effects, I would never say that there is no stereo effect - just that I personally do not seem to experience this.

Let me end by directing readers to Alan Dyer's article on comparing the TV BV to the AP Baader BV on page 46 in the September 2002 edition of Sky & Telescope. Alan thinks that BVs are the next big thing in astronomy - time will pass judgment on this!

ITEMS FOR SALE

Meade Super Wedge	$295
Meade HD Tripod	190
Meade #1812 12v to 18v conv	30
Scope Saver for LX Series	60
Meade 35mm camera mount	15
Meade LX200 front power panel	50

Contact George Kolb - EVAC Member
480-706-0936

BOYCE THOMPSON STAR PARTY
November 2nd

The Boyce Thompson Arboretum will be hosting another "night under the stars" on Saturday, November 2nd, from 6:00 PM till 9:00PM. EVAC members are invited to attend the buffet dinner and set up telescopes for public viewing afterwards. As this is a deep sky night, those who wish to remain after the public has left and continue to observe, may do so. The last one to leave (usually me!) will lock up the gate. Sign-up sheets will be available at the next two meetings, or you can contact me (Don Wrigley) directly via phone (480-982-2428) or e-mail (djwrigley@mchsi.com).

Don Wrigley, editor of the EVAC Newsletter, has changed his email address effective October 1st. Be sure to note the new address to send your email to: DJWrigley@mchsi.com

East Valley Astronomy Club
Membership Form

Please complete this form and return 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:
( ) E-mail (saves club postage/printing)
( ) U.S. Mail

Total enclosed $_____

Name:_____

Address: _____
_____

Phone # (____)_____

E-mail _____

URL: _____

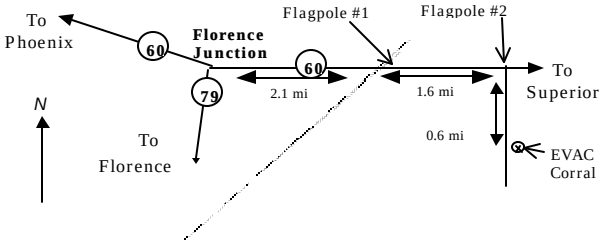
EVAC Star Parties

Local Star Party: Florence Junction Site

General Information: The Florence Junction site is the official site for the East Valley Astronomy Club's Local Star Party, 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. (Report gunfire or illegal activity: 800/352-3796; Land use permit number: 26-104528.)

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

How To Get There: Take US 60 east to Florence Junction. Go past Florence Junction. 2.1 mi past FJ are railroad tracks, and on the right will be a flagpole. Do not turn there. Continue on for another 1.6 miles until you find the second flagpole on the right. This is your turn. Turn right, and continue on the dirt road for 0.6 miles. The corral is on the left, just before a gas-line sign.

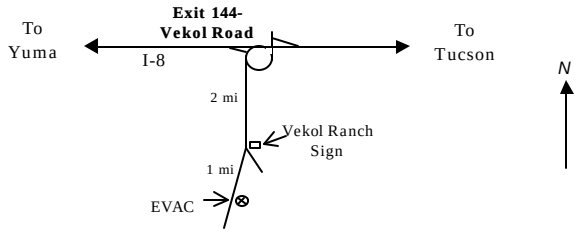


Deep Sky Star Party: Vekol Road Site

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 1½ hours 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 dirt road 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.



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East Valley Astronomy Club—2002 Scottsdale, Arizona
EVAC Homepage—http://www.eastvalleyastronomy.org/

Membership & Subscriptions: $20 per year, renewed in December. Reduced rates to *Sky & Telescope* and *Astronomy* available. Contact Randy Peterson. PO Box 2202, Mesa, AZ. 85214. Email: rgpeterson@cox.net

Club Meetings: Second Wednesday of every month at the Scottsdale Community College, 7:30 p.m. Normally Room PS 170 or PS 172 in the Physical Sciences Building. See map below.

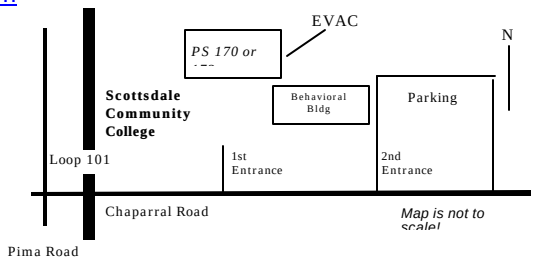
Address Changes: Contact Randy Peterson. Email: rgpeterson@cox.net or PO Box 2202, Mesa, AZ. 85214.

Newsletter: Contact Don Wrigley or Kathy Woodford, 423 W. 5th Ave, Apache Jct, AZ 85220. The Newsletter is mailed out the week before the monthly Club meeting. An electronic version is available in Adobe PDF format in lieu of a printed copy. Please send your contributions to Silvio Jaconelli SilvioJ@msn.com or Don Wrigley DJWrigley@mchsi.com. Contributions may be edited.

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

Book Discounts: Kalmbach and Sky Publishing offer a 10% Discount to EVAC members on books and other items from their catalogs! 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 10% club discount.

EVAC Party Line: Let other members know in advance if you plan to attend a scheduled observing session. Contact Dave Coshow (480) 730-1132.



Deadline for the November Newsletter is Oct 28th

Space is limited. Get your articles in early. May be edited for brevity.

East Valley Astronomy Club

EVAC
PO Box 2202
Mesa, AZ 85214

Don Wrigley & Kathy Woodford, Co-Editors
Silvio Jaconelli, Coordinator
423 W 5th Ave, Apache Junction, AZ 85220

EVAC on the Internet
EVAC Homepage: www.eastvalleyastronomy.org

E-mail Mailing List:
AZ-Observing is a fairly general mailing list about observing in Arizona. Included are star party information, who is going, as well as the latest observations and astronomical events.
To join, send E-mail with the "Subject: subscribe" to AZ-Observing@freelists.org

Although EVAC is a private club not open to the public, we do encourage potential new members to initially join us at our club meetings and/or star parties to help them determine the suitability of the club to meet their needs.

Reminder: Next EVAC Meeting Wednesday, October 9, 2002