

# East Valley Astronomy Club

June 2002

[www.eastvalleyastronomy.org](http://www.eastvalleyastronomy.org)

Scottsdale, Arizona

## President's Comments

By Martin Bonadio, 2002 EVAC President

Well gang, summer is here again, and I find myself writing to tell you about how excited I am to be planning a trip to the Grand Canyon again this coming June. The event runs from June 8<sup>th</sup> – June 15<sup>th</sup>. I'm going up on the 13<sup>th</sup> and returning on the 16<sup>th</sup>. I think this is a great event. It's held each year in an effort to bring more people closer to the wonders of our hobby, and to let them gaze at some of the great deep sky or solar system objects visible. But what's nice is that I actually have the chance to get away from the city for a few days, lounge around all day, and then observe for 3 or 4 nights in a row. All this from a dark site that has a great elevation! Let's just hope that there are no monsoons like I experienced last year. DVD movies in a campsite aren't my idea of an observing getaway. So please nobody buy any new equipment (Peter A. I am talking to you specifically).

Anyway this past month was full of activities. A group of EVAC members led by Howard Anderson participated in an Astronomy day event at the Science Center – thank you all. A large group of us headed out to Boyce Thompson last month and were greeted by a large crowd of enthusiastic people who had a chance to observe a number of things in dark skies from a great dark site near Globe. Plus the BBQ before-hand was top-notch. I want to have another one of these!!

I hope you are all having the chance to enjoy the spring and early summer skies. I am down to about 100 items left on my "Martin 200" list. I'm saving these for the canyon, and then I'm satisfied as

See President's Comments cont'd on Page 2

<b>EVAC EVENTS CALENDAR - 2002</b>							
			<-- Members only -->				
	<b>New Moon</b>	<b>Meeting</b>	<b>Local</b>	<b>Deep Sky</b>	<b>Gilbert</b>	<b>Other Events</b>	<b>Club Meeting Speaker</b>
<b>Jun</b>	6/10	6/12	6/1	6/8	6/14	8 - 15 Grand Canyon Star Party 10 Partial Sol Eclipse	Warren Kutok (Telescopes)
<b>Jul</b>	7/10	7/10	7/6	7/13	7/12		
<b>Aug</b>	8/8	8/14	8/3	8/10	8/9		Steve Coe (Deep Sky)
<b>Sep</b>	9/6	9/11	9/14	9/7	9/13		

**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.

Other events coming up:  
Jun 8 - 15, Grand Canyon Star Party  
Jun 10, Partial Solar Eclipse event at AZ Science Center  
Oct 4/5, All AZ Star Party.

the monsoons roll in and the temperatures top 120! It will then be time to think of some new astronomy humor for the fall I think.

Speaking of the fall, I thought I would put in an early plug for club officers. Yeah – I know its months away – however Randy Peterson and I have been in our positions for 2 years now, and have reached our cap. I consider the President and Treasurer spots to be very important ones to fill and have interest in early. They take a lot longer to transition into and are important to the monthly operation of the club. I personally have enjoyed my role these past years, and really want to see the club continue to succeed. If you think you want to help continue move it forward and are interested in either of these positions, just drop me a hint and we can chat about it. Being club president has been rewarding to me because I have met a lot of nice people and made a lot of new friends. I also get asked a lot of questions and feel that I have learned a lot just by being in a position of teaching others or answering those questions. Gee, I'm also really sorry that I gave out that bad advice on hanging a 200lb counter weight from the top of that dome to smooth tracking!! (I'm kidding – of course).

I was pleased that Derrick Lim purchased my 13.25" telescope this month. I hope that it serves him as well as it did for me. Now I already know I'm going to miss the views of the Helix through it. Let's see how long it takes before I show up at some party with a 15" dob! Haha. However, I have become reacquainted with my LX-200 10". This has been a great scope and I am glad to be using it more often. It weighs 75lbs and my back is ever so happy about this. But my triceps are looking buff these days too!

I forgot how nice it was to cheat and have the "goto" do all the work. I've been using it in my backyard where I only have 1-2 hours at a time to observe on a typical planned night. But this makes honing in on a double star easy, and I get to spend my time observing instead. I will admit that there have been times when I have struggled to split an easy binary pair because I was looking at the wrong star! (What's scarier is once I actually split something and it wasn't even a double!!! Haha). Also, from a city site it's not always easy to star-hop. While I enjoy the no-frills Dobsonian point and shoot observing style, I must tell you that a "goto" or digital setting circle can really enhance city-observing experiences as I have testified. Especially when you are short on time or stars!

Thanks to everyone who has been a part of the club this year and participated or joined in Club events. We have a few trips and special events planned for the rest of this year, and next month I will have more details on all of that to share with you. In the meantime enjoy and clear skies.

**If it's clear...**  
**by Fulton Wright, Jr.**  
**Prescott Astronomy Club**  
**for June 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 Saturday, June 1, about 8:45 PM, you can see two planets next to each other. With you unaided eye, look 15 degrees above the west northwest horizon for Venus (mag -4) and Jupiter (mag -2) a couple of degrees apart. 10 degrees above them are the two first magnitude stars, Castor and Pollux. The planets are also close on the following evenings.

On Monday, June 10, in the late afternoon, you can see a partial eclipse of the Sun. With a number 14 welder's filter, pin hole projection, or other safety measure, look in the west for the Sun (you can't miss it.) You must not look directly at the Sun at any time during this eclipse without proper eye protection. Here is the schedule: 5:19 PM eclipse starts 6:20 PM approximate middle of eclipse (about 70% of diameter covered) 7:20 PM eclipse ends 7:42 PM Sun sets

See CLEAR Cont'd on Page 3

**CLEAR Cont'd from page 2**

On Wednesday, June 12, about 8:45 PM, you can see the Moon near Jupiter. With your unaided eye look 10 degrees above the west-northwest horizon for the pair about 2 degrees apart.

Jupiter sets early this month so there is just a small viewing opportunity starting around 8:30 PM each night. Here are some interesting dates:

June 1 & 15 The four satellites are lined up in order.

June 2, 9, 10, 12, 19, & 22 Two satellites are close together.

June 7, 7:41 PM Sun sets with Europa and Ganymede in front of Jupiter  
and their shadows on Jupiter

7:51 PM Ganymede moves from in front of Jupiter

8:09 PM Europa moves from in front of Jupiter  
(still 2 shadows)

8:48 PM Io appears from Jupiter's shadow

9:29 PM Europa's shadow leaves Jupiter (1 shadow left)

9:52 PM Jupiter sets

June 14, 7:44 PM Sun sets

7:53 PM Io disappears behind Jupiter (3 moons showing)

8:08 PM Europa moves in front of Jupiter (2 moons showing)

9:00 PM Ganymede moves in front of Jupiter (1 moon showing)

**EVAC Meeting Minutes  
May 8, 2002**

by Tom Polakis, Secretary

The meeting opened with dark adaptation tips by President Martin Bonadio. He went on to mention upcoming events. Randy Peterson may be contacted about EVAC's participation in showing off the June 10 solar eclipse.

Show and tell included Tom Polakis, who showed scenes of a rocket launch and Comet Ikeya-Zhang. Steve Bell was up next, with a discussion of Lunar Phase software. For \$30, one gets rise/set times, location of the terminator, and a large database of lunar features. The Web site is <http://indigo.ie/~gnugent/LunarPhase>.

The main speaker was Peter Wehinger, who works in the office of the director of Steward Observatory. His talk featured large telescopes, including the 6.5-meter, single-mirror MMT, the 6.5m Magellan telescopes, and the Large Binocular telescope.

# BACKYARD ASTRONOMER

## Binoculars (Part Two)

By Bill Dellinges

Last month we took a general look at the world of binoculars. This month we'll take a look at some specific models and get our feet wet in the market place. Before jumping off into the deep end though, I want to briefly address one important issue-quality. To the lay person, all binoculars look similar. Why then, is one pair \$49.95 and another pair \$499.95? The answer is quality. You get what you pay for in optics. The problem is that a binocular is a very complicated optical device, much more so than a telescope. Being typically an F5 system, severe demands are made on its optical fabrication. It may have up to ten optical elements in EACH barrel multiplying the cost by two. These elements must be precisely ground, polished, multicoated, and installed in such a way as to be resistant to displacement from rough handling (they're usually hanging around your neck and flying around while hiking, etc.). In short: they must be well made and durable. This is what drives the price up to what some deem obscene levels. These "high end" binoculars though, will meet the stringent requirements discussed before, perform beautifully, and last the owner a lifetime. "Low end" binoculars priced under \$100 are usually junk and will soon show their shortcomings. One could argue, I suppose, that a somewhat acceptable low end unit could be used till it fell apart, and then replaced with another like unit! But why get caught in such a sad cycle when there is the alternative of either going first class or selecting a binocular from what we might call a "mid-range" level of quality, where we can find many acceptable, serviceable glasses.

Allow me to discuss a few binoculars I'm familiar with. I had been using Celestron Ultima 8x56mm's (\$250) for a number of years. Handsome in appearance, they felt great in my hands and had very good optics. I sold them because I was not happy with their eye relief, which was stated to be 21mm - baloney. I could not see the full field with my glasses on so they had to go. They're a super glass if you're not wearing glasses. By the way, this pair taught me something - don't trust what a manufacturer claims to be their eye relief. Look and judge for

yourself. Funny, recently I looked through a Celestron 7x50mm Ultima (\$230) with eye relief of 20mm (1mm less than the 8x56) and its eye relief was better.

I also had a chance to look through a pair of Celestron Ultima 9x63mm's (\$320). Wow, I was impressed. I could see pretty much the full field with glasses on and they felt great in my hands. I didn't get a chance to check them on stars but assume they're fine performers, as is the whole Ultima line. They're on Wm. Cook's list of "My Favorite Astronomy Binoculars." (S&T April '97 p.46). At 35 ounces they're a bit heavy, but not bad for the aperture. They had the same advertised 21mm eye relief as the 8x56mm but I could see much more field with glasses on - go figure. I've been shopping for a 7x50mm to replace the 8x56mm I sold. I thought about the Fujinon 7x50mm FMT-SX (\$500), a no compromise high end glass built like a tank. But I want something light to use casually and they weigh 50 oz. (!) and aren't that much smaller than my Fujinon 10x70's (see below). So they're out of the running. I'm not a big fan of Orion, but must admit their 7x50mm Vista's (\$200) look interesting. Very similar in looks to the Ultima line. I recall noting at their store that I could see the full field with glasses. They only weigh 28 oz., have 22mm eye relief, are made in Japan (not China), and have a 20 year warranty. With Orion's 30 day unconditional return policy, they are mighty tempting!

Let me share with you a superb glass. I bought them for nature use basically, but I suppose I could use them for astronomy. The Swarovski SLC 7x42mm (\$900) is a fabulous roof prism binocular made in Austria. It, along with Zeiss and Leica, are considered the world's finest binoculars (no offense to Nikon and Fujinon). A tad heavy at 33.5 oz., it has 19mm of eye relief. Wearing glasses, I can see the WHOLE field with its twist down cups retracted. The optics are superb with very little edge distortion. It's as though there's no glass in them and the magnified image has magically appeared before your eyes.

BINOCULARS continued on pg 5

An interesting new glass on the market is the Takahashi 22x60mm Astronomer (\$1,300). I have no experience with it but check its review in S&T March '01, P.54.

Another fine glass is the Fujinon 10x70mm FMT-SX (\$600). A killer! The FMT line boasts: an exceptionally flat, distortion free field (5.18 degrees in the 10x70), 13 layer "EBC" coatings on each optical surface resulting in 95% total light transmission through the system, nitrogen purged barrels ribbed to reduce internal reflections, waterproofing, and a lifetime warranty. By the way, the FMT models utilize individual focusing eyepieces, less convenient than central focusing but providing a sturdier assembly and precise focus. This approach is not really a problem in astronomical use where everything is at infinity anyway-focus once and that's it. I can hand hold these guys (76 oz.) for short periods. I can almost see the whole field (23mm eye relief) with glasses. What blows me away about them is they can pull in about every Messier object out there (except for planetaries) where smaller binoculars and finders fail. They're a virtual RFT when mounted on a tripod.

A few years back I bought Miyauchi's 20x100mm fluorite APO binoculars (\$3,700). I love these guys. A hefty 13 pounds, they require a sturdy tripod. With an eye relief of 25mm, I can see the full 2.5 degree field with cups down and glasses on. Sometimes I use these babies for stargazing instead of a telescope, they're so much fun offering an exciting new wide field view of the night sky. See my review at the club web site.

Continuing along the lines of monster binos, those with deep pockets may consider: the Fujinon 25x150mm (about \$8,000), Orion (Vixen) 25-75x125mm (\$4,500) and the Miyauchi 25x141mm (\$11,000, fluorite version \$13,000).

One last comment before saying arrivederci. I have not mentioned anything about the recent appearance of "Image-Stabilized" binoculars by Canon, Fujinon, and Zeiss. Frankly I don't know much about them. I do know they are expensive, starting at about \$500, are somewhat bulky, require batteries, but apparently work! I got a quick look through a pair once and sure enough, the field stood pretty still while hand holding them at 15x. If you have the shakes, you might want to look into them (no pun intended). Enjoy the view!

Notes:

1) To measure your pupil size, you can order a pupil gauge from S&T for \$1.50 (on sale), item #S0065 in their catalog.

2) Additional references for binoculars: "Star Wares" by Phil Harrington (P.53-60). "Backyard Astronomer's Guide" by Terence Dickinson (P.24-39).

3) If room permits this month, a list of recommended binoculars will follow this article, if not, look for it the July newsletter or email me at [mrcomet@qwest.net](mailto:mrcomet@qwest.net) for a copy.

## Binocular Recommendations

**Basics:** A "7x35" binocular means it has 7 power (or magnification) and the two big lenses in front are each 35 millimeters in diameter (25.4mm = 1"). There is a large variety of sizes available such as 8x32, 8x42, 7x50, 10x50, 10x70, 20x100 (!). Generally speaking, any binocular with a lens 42mm or smaller is used for nature, sports, birding, etc. Larger binoculars are usually used for astronomical, naval, or hunting purposes where larger light gathering ability is required. Their basic two types are "porro-prism" and "roof-prism". The porro has the distinctive bulge on each side while roofs have a more sleek appearance like two tubes attached together. Each have their pros and cons. Prices for good porros begin at about \$200, roofs at \$400. Buy the best pair you can afford, they'll last you a lifetime. Stay away from brands like Tasco, Jason, (Sears, Wards, etc.), or Bushnell (Bausch/Lomb's low end). Stick

See Recommendations Page 6

with a brand name like Nikon, Fujinon, Leica, Pentax, Minolta, Swarovski, Zeiss, Swift, Bausch/Lomb. In-house brands such as Celestron or Eagle Optics may be considered. Important factors to look for: "fully multi-coated lenses", eye relief of at least 18mm (if you wear glasses), nitrogen purged, "Bak-4 prisms", not Bk-7, twist down eyecups, weight, feel, and most important-how do things look through them? Is the view impressive, with no eye strain, images clear out to near the edge? **Never** buy a pair without trying them! Mail order is ok if you're familiar with the exact model you're ordering. Good camera stores have a fine selection.

Also see:

[www.eagleoptics.com](http://www.eagleoptics.com), [www.buytelescopes.com](http://www.buytelescopes.com), [www.astronomics.com](http://www.astronomics.com), [www.adorama.com](http://www.adorama.com).

Also, try "binocular reviews" in your computer search engine to find organizations like: [www.betterviewdesired.com](http://www.betterviewdesired.com) which critique binoculars.

Below you will find a list of binoculars I like or have received good reviews: (P = porro, R = roof).

**Bausch/Lomb:** 8x42 Elite \$1000 (R), 8x36 Custom \$258 (P).

**Celestron:** 7x42 Ultima \$200 (P), 7x50 Ultima \$200 (P), 9x63 Ultima \$300 (P), 20x80 Deluxe \$500 (P).

**Eagle Optics:** 8x32 \$358 (R), 8x42 Ranger \$319 (R).

**Fujinon:** 7x42 CD \$458, (R), 7x50 FMT-SX \$450 (P), 10x70 FMT-SX \$600 (P).

**Leica:** 8x32 BN \$995 (R), 8x42 BN \$1000 (R), 8x50 BA \$1000 (R).

**Minolta:** 8x42 Activa \$400, 7x50 Activa \$158 (P).

**Nikon:** 8x32 Superior E \$800 (P), 8x40 Monarch \$250 (R), 8x42 Venturer \$1000 (R).

**Orion:** 8x42 Vista \$190 (P), 7x50 Vista \$200 (P).

**Pentax:** 8x42 DCF \$420 (R), 7x50 PCF \$148 (P).

**Swarovski:** 8x32 SLC, 7x42 SLC, 10x50 SLC all (R) ~\$800-\$1200.

**Swift:** 8x42 Ultra Lite \$218 (P), 8x44 ED Ultra \$348 (P), 8.5x44 Audubon \$248 (P). 8.5x44 HHS Audubon \$500 (R).

**Zeiss:** 8x42 Victory \$950 (R). 8x56 Victory \$1249 (R).

Bill Dellinges [mrcomet@qwest.net](mailto:mrcomet@qwest.net)

## Dome For Sale



8'0" Observatory Dome with 32" slide shutter with all 4 vertical and 4 horizontal good size casters. Steel ring plate, four steel keepers holding horizontal casters. Can help move with trailer and will also sell trailer for \$200 firm. Call to see dome Sat, June 8th. # 480-515-4339. Bidding will start at \$800 payable only in cash. Please call ahead for information and directions.

We will open at 10AM on Saturday. If you call that morning, please call 602-526-9810

## 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: \_\_\_\_\_

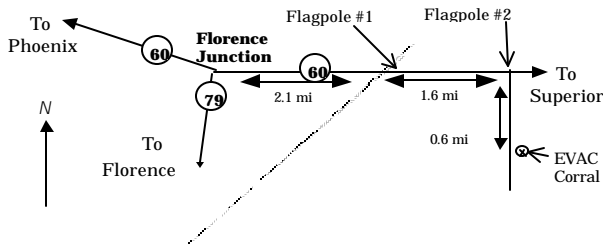
### EVAC Star Parties

**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.

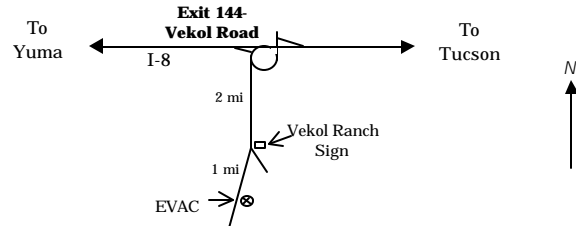


**Deep Sky Star Party: Vekol Road Site**

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.



**EVAC Officers****PRESIDENT**

Martin Bonadio  
(480) 926-4900

**VICE-****PRESIDENT**

Diana Jane  
(480) 833-2002

**TREASURER**

Randy Peterson  
(480) 947-4557

**SECRETARY**

Tom Polakis  
(480) 967-1658

**PROPERTIES**

Gary Finnie  
[gfinnie@kam-az.com](mailto:gfinnie@kam-az.com)

**NEWSLETTER**

Kathy Woodford and  
Don Wrigley, Editor  
(480) 982-2428

Silvio Jaconelli,  
Coordinator  
(480) 926-8529

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](mailto: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.

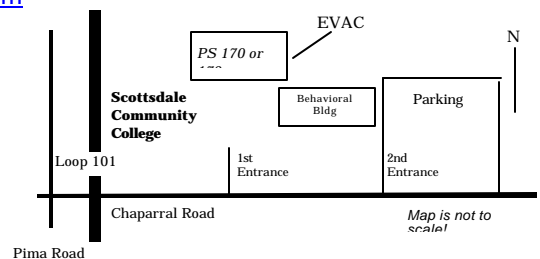
**Address Changes:** Contact Randy Peterson. Email: [rgpeterson@cox.net](mailto:rgpeterson@cox.net) or PO Box 2202, Mesa, AZ. 85214.

**Newsletter:** Contact Don Wrigley or Kathy Woodford, 423 W. 5<sup>th</sup> 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](mailto:SilvioJ@msn.com) or Don Wrigley [DJWrigley@earthlink.net](mailto:DJWrigley@earthlink.net). 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](mailto: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 July Newsletter is June 26<sup>th</sup>**



**East Valley  
Astronomy Club**

EVAC  
PO Box 2202  
Mesa, AZ 85214

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

**EVAC on the Internet**

**EVAC Homepage:** [www.eastvalleyastronomy.org](http://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](mailto: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, June 12, 2002**