

# East Valley Astronomy Club

December 2000

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

Scottsdale, Arizona

## President's Message

By Silvio Jaconelli

This is my last newsletter message as President of EVAC. It's been two years since Don Wrigley first approached me to ask that I fill this position, and how time has flown by! The December meeting will be my last official act as President before handing over the reins to Martin Bonadio whom, I am convinced, will do an excellent job.

Firstly, I'd like to thank the outgoing Board/Officers both past and present for all their support – Chuck Crawford, Tom Mozdzen, Tom Polakis, Stan Ferris, Rick Scott, Pedro & Diane Jane, Martin Bonadio, Ken Levy, DeeAnn Zacher and Don Jones. They have given their time and resources without any re-imbusement to serve the club and I want to thank them for all their efforts. During their tenure, we have gone to electronic newsletters in a big way (saving the Club from incurring heavy printing and distribution costs), we have set up beginners' labs, had a fun trip to Kitt Peak, seen the Adopt-a-highway program go from strength to strength, put in motion the set up of special interest groups, and we have had some outstanding speakers at our monthly meetings. Please forgive me if I have missed some accomplishments.

Next, I'd like to welcome the new Board and Officers :

Martin Bonadio – President  
 Dave Coshow – Vice President  
 Randy Peterson – Treasurer  
 Tom Mozdzen – Secretary  
 Rick Scott - Properties  
 Jim and Chris Kline – Newsletter  
 Ken Levy – Special issues  
 Diane Jane – Board Member  
 Stan Ferris – Board Member  
 Joe Goss – Board Member  
 Gene Lucas – Board Member  
 Steve Bell - Board Member

I am sure that they will do an excellent job over the next 12 months.

The December meeting will be held at the SCC Auditorium – what a way to end my tenure! I want to recognize Rick Scott and Joe Orman for putting together the slide show that we will see then – I am really looking forward to this.

EVAC & Other Events: 2000/2001					
	New Moon	Meet	Local	Deep Sky	Other
Nov	25 <sup>th</sup>	8 <sup>th</sup>	18 <sup>th</sup>	NA	Elections
Dec	25 <sup>th</sup>	13 <sup>th</sup>	16 <sup>th</sup>	23 <sup>rd</sup>	12/9 Christmas Party Slide Show Meeting
Jan	24 <sup>th</sup>	1/10	1/20	1/27	New Officers  EVAC Board Meeting
Feb	23 <sup>rd</sup>	2/14	2/17	2/24	
Mar	25 <sup>th</sup>	3/7	3/17	3/24	3/24 Messier Marathon

And don't forget the upcoming Christmas Party – let's keep our fingers crossed that we'll have some good weather for this so that we can avail ourselves of the outdoor facilities that will be available.

Finally, I'd like to end up by passing on a special word of thanks to Chuck Crawford, one of the best things to have happened to the club in recent times. Chuck has done a wonderful job in organizing some top-notch speakers, in arranging field trips, and in organizing special events such as picnics and parties. Thank you, Chuck.

## **From the Vice President By Chuck Crawford**

### **CHRISTMAS PARTY - DECEMBER 9**

Members are invited to our annual Christmas party beginning at 5:00pm until? The club will provide subs and pizza. The rest of the goodies are potluck.

Location: Alta Vista Apartments clubhouse at 1444 north Recker road (between brown and Mckellips) in mesa. Parking is ample but please do not park in covered spaces.

So we may have some idea of attendance please contact Martin Bonadio (480-926-4900) or Chuck Crawford (480-985-8824) if you plan to attend and have not signed up during the last club meetings (November or October).

### **DECEMBER MEETING SPECIAL PRESENTATION**

Mark your calendars! Everyone is welcome -- I hope to see people from all different clubs and different parts of the state. This auditorium has plenty of room, so invite all your friends and family!

SPECIAL SLIDE SHOW at next meeting of the EAST VALLEY ASTRONOMY CLUB (EVAC) WEDNESDAY, DECEMBER 13, 7:30 PM. FREE! ALL ARE WELCOME!

At the December 13 EVAC meeting, Rick Scott and Joe Orman will present a special slide show with two computer-controlled projectors and a synchronized musical soundtrack. This 30-minute show, titled "The Sky We Share," will showcase the photography of club members Rick, Joe, Tom Polakis, Randy Peterson, and Chris Schur. He show features photos of the day and night sky, including rainbows, lightning, sunsets, eclipses, comets, meteors, nebulae and galaxies, as well as observatories, telescopes and star parties.

MEETING LOCATION:

AUDITORIUM, SOUTHWEST CORNER  
OF SCOTTSDALE COMMUNITY  
COLLEGE CAMPUS

(CORNER OF LOOP 101 AND  
CHAPARRAL ROAD IN SCOTTSDALE,  
ARIZONA).

For general information on the East Valley Astronomy Club, refer to the EVAC web site:

<http://www.eastvalleyastronomy.org>

For further info contact:

Joe Orman

(480) 675-2470

[Joe.Orman@motorola.com](mailto:Joe.Orman@motorola.com)

<http://pages.prodigy.net/pam.orman/JoeHome.html>

Rick Scott (480) 821-5721

[rjscott@home.com](mailto:rjscott@home.com)

<http://members.home.net/rjscott>

## A PERSONAL NOTE

As outgoing Vice President I wish to thank all of the membership for their cooperation and participation in the past year's events. Hopefully all were able to find some measure of enjoyment and education from the many speakers and activities arranged over that time frame.

I would like to wish the incoming officers the best and know that in their capable hands more upcoming events and activities are just beyond the horizon.

Thank you for allowing me to serve as your Vice President and best wishes to each and every member now and in the future.

## EVAC Meeting Minutes

By Tom Mozdzen

### November 11<sup>th</sup>, 7:32pm

Silvio Jaconelli called the meeting to order. There were 48 people in attendance down 20 from the last meeting.

## Announcements:

- The "All Arizona Star Party" had "clear skies" and ~8 brave optimistic souls who were able to do some observing.
- Adopt-a-highway went well
- The picnic: Someone actually showed up!
- Thursday Nov 16<sup>th</sup> – SCC Star Party – need 6 scopes.
- Sat Dec 9<sup>th</sup> 5:00pm Christmas Party @1444 N. Recker (between Brown and McKellips) in Mesa.
- Wed Dec 13<sup>th</sup> EVAC Christmas meeting with Rick and Joe's marvelous slide show with music at the SCC auditorium.
- Sign up sheets for six different **Special Interest Groups (SIG)** were presented:
  1. Lunar observing
  2. Solar observing
  3. Telescope Making
  4. Double stars
  5. Astrophotography
  6. Deep sky

## Elections:

The Officers and Board Members for 2001 were presented and elected with no objections.

### Officers:

President Martin Bonadio

V. President David Coshaw

Treasurer Randy Peterson

Secretary Tom Mozdzen

Newsletter Editor Jim Kline

### New Board Members:

Ken Levy

Gene Lucas

Stan Ferris

Steve Bell

Diane Jane'

Joe Goss

## **Beginner's Lab**

Schmitt Cassegrains – Dave Coshov 480-730-1132  
General Topics - Martin Bonadio 480-926-4900

Due to weather and the Holidays the program will resume shortly after the first of the year.

### **8:00 - Break**

Steve had copies of his new book "Deep Sky Observing" available for signing and purchasing.

### **8:20 pm - Main Speaker: Steve Coe**

Steve spoke on the topic of "dark nebula". He showed many photos of examples, and of some of the early pioneers in the field.

### **9:00 pm - Show and Tell**

- Laurice Dee showed slides of the Cassini and Galileo space probes.
- Tom Polakis showed slides of his Full Moon Grand Canyon Hike round II.
- Joe Orman showed photos taken with a camera of a variety of items.

### **9:30 pm Meeting Adjourned.**

## **Editor's Note**

**By Martin Bonadio**

This edition of the newsletter marks my last effort as next month I begin my role as club president. I want to welcome Jim Kline as your newsletter editor at this time.

I also want to take this time to thank everyone for his or her contributions over the

past year or so. It's been a pleasure to assemble the newsletter each month, and I'll miss getting a sneak peak going forward. My new role as president means I have to come up with something interesting to share with everyone each month too. So you can bet that I'll still have my hands in the pot, and will continue to contribute to the newsletter's cause. The EVAC newsletter has always meant a lot to me, and it will continue to be a valuable way for members to communicate their observations, ideas, opinions, and club news. I want to encourage you all to continue doing a great job.

As editor my job has been to assemble and publish the newsletter. The great quality of it's content has always been the result of those who have given me articles and announcements. I want to thank everyone for allowing me to perform this function for the club!!

## **All-Arizona Star Party**

**By Joe Orman**

As darkness was falling Saturday, I found myself driving down the dirt road south of Arizona City toward the All-Arizona site and wondering -- would anyone else be there? The rain of the previous few days would keep away the casual observers, and although the weather was clearing, this muddy road might be enough to scare off the rest. Upon arriving at the mostly-dry field, I found that I was part of a group of about 10 others who had successfully navigated past the mud holes. Instead of the hundred-or-so scopes that fill the field at a typical All-Arizona, there was only my 6" Newtonian, Rick Scott's 10" Lurie-Houghton, a 3 1/2" Questar, a 10" Meade LX-200 SCT, and an 8" Celestron SCT. Ray Farnsworth, the landowner, came out and chatted with everyone; he is a friendly fellow

who made it clear that we were more than welcome. Ray deserves **big thanks** for letting us hold All-Arizona on this excellent site each fall, and also the Messier Marathon each spring.



*Rick Scott views the moon through his new homemade 10" Lurie-Houghton telescope. Photo by Joe Orman.*

The few clouds along the horizon soon dissipated, and we were treated to a very clear evening with good seeing. We all witnessed the dramatic sight of the crescent moon setting behind distant hills, then turned our attention to Saturn and Jupiter rising in the east. I don't remember ever seeing such fine detail in Jupiter's bands! Other treasures the night sky revealed to us were the Merope Nebula in the Pleiades, the Andromeda Galaxy, the double star Albireo, the Veil & Network Nebulae, the Lagoon Nebula (M8), the red star  $\nu$  Aquila, Neptune and its moon Triton, the ET Cluster (NGC457), the Double Cluster in Perseus, and the globular cluster M13.

During the night we spotted several satellites, and a random meteor here and there. But as the evening wore on, it became obvious we were ill prepared to fight the dew forming on our optics. Most packed up and drove back to the city, leaving only Rick Scott and my family to spend the night.

For my Newtonian telescope, the dew was not much of a problem. I just warmed the eyepiece in my hand for a few minutes between views! But eventually I tired of looking through the scope, so I just leaned my head back and simply enjoyed looking at such a fine, dark sky. Most memorable was the crystalline arrangement of bright planets and stars in the east. Around 11 o'clock, I made my first conscious effort to pick out the Gegenschein, the faint glow that appears directly opposite the sun. I was successful; I could see a faint but noticeable oval patch high in the sky, stretching perhaps 10 or 15 degrees along the ecliptic.

By then, a few small clouds started to move in. I had had enough of the cold and damp anyway, so I turned in for the night. The next morning, I arose before dawn and enjoyed the solitude of the site as the eastern horizon brightened and the stars faded. Then, finally, I watched the first rays of sunlight glint off the domes on Kitt Peak to the south. It was time to go home.

As it turned out, many of those who chose not to come to Arizona City had their own star parties all over the state. I guess you could say that this is one All-Arizona that really took place all over Arizona!

# Library Focus

By Joe Orman

This month's review: ***The Petroglyph Calendar: An Archaeoastronomy Adventure*** by Hubert A. Allen, Jr.



One day when he was out for a walk, Hubert A. Allen, Jr. made an intriguing discovery. At base of the Sandia Mountains near Albuquerque, New Mexico, he found a near-perfect equilateral triangle deeply carved into the flat top of a granite boulder. The site afforded a clear view of the western horizon, and as the sun set that evening, Allen placed a pen upright in the center of the triangle. He watched as the shadow cast by the pen fell in perfect alignment with one point of the triangle. The date was on June 24, 1997 -- practically the summer solstice. Could this be an ancient astronomical calendar?

Thus began a research "adventure" in which Allen would seek celestial significance in the two other points of the triangle. Allen was in for a uphill battle, since he had, he

admits, "no previous formal training in astronomy and just a smattering in archaeology." But after browsing the books at a museum gift shop, he declared himself an Archaeoastronomer! He would eventually show that at the winter solstice, the sunset shadow is cast away from the second point, to the middle of the opposite side. And the third point of the triangle seems to point to the North Star, Polaris.

His findings are intriguing, but some of the mathematical details make me skeptical. Allen's *averaged* measurements of the triangle points match both sunset directions to within 3°, but the uncertainty in his measurements is fairly large -- which is not surprising given that the position of the *gnomon* (shadow-casting device) at the triangle's "center" is somewhat arbitrary and a hand compass was used (two different measurements of one point differ by 5°). I was impressed that "... the petroglyph calendar in New Mexico is at the optimum latitude for its triangular geometry based on the two solar extremes," until I read that this "specific latitude range" is approximately 34° to 40° north latitude -- a swath around our earth almost 500 miles wide! And the 300-pound freestanding rock could have shifted over the centuries, only adding to the possibility that these alignments are mere coincidence. In any case, watching the sun's shadow progress along one half-edge of a 4-inch triangle does not seem a very practical way of measuring the year. Ancient use of a *gnomon* was fairly common, but wouldn't notches along the edge of the boulder be more accurate markers for the shadow?

Allen is on his most shaky mathematical ground when he theorizes that the third point of the triangle (which points to an azimuth of 5°) aligned with Polaris at the date of the

petroglyph's construction (presumed to be 1200 AD). Here he makes a basic error: The fact that Polaris appeared  $5^\circ$  from the celestial pole in the year 1200 due to precession does **not** mean that it would appear at a constant azimuth of  $5^\circ$ ; Polaris could appear anywhere on a  $5^\circ$  radius circle about the pole, depending on the season and time of night -- covering a  $10^\circ$  range in azimuth! But more subtly, Allen's use of this Polaris alignment to date the petroglyph to the year 1200 employs circular reasoning -- he *presumes* the third point was constructed to align with something, then he looks into the past to see when it actually did, and takes that as the date of its construction!

Besides the mathematical details, there are also cultural considerations that are just as important:

1. With its straight edges and sharp inside corners, such a deep triangle in solid granite would seem to suggest the use of metal tools not available to Pre-Columbian civilizations. Allen does not address tool-making capabilities at all.

2. Allen failed to find a record of a single other triangular petroglyph in the American Southwest which could function as an astronomical calendar. The depth of the petroglyph (about  $1\frac{1}{2}$  inches) is also uncharacteristic; directly across the Rio Grande Valley, Petroglyph National Monument has over 17,000 petroglyphs, all with their designs shallowly pecked into the rock surface.

3. There are no other associated artifacts to indicate this site was actually used in ancient times, with the sole exception of a similar "heart-shaped" petroglyph nearby.

The casual reader might shrug off these shortcomings, but I wonder if they would withstand the scrutiny of scientific peer review. The closest Allen comes to independent verification of his findings is, "I took a couple of photographs and showed them to the noted archaeologist

Dr. Frank Hibben, who pronounced that both were probably real petroglyphs, and oddities at that." Indeed, several statements like the following lead me to wonder if Allen let personal desire drive his interpretation of the data: "Instead of responding to these highly rational thoughts, I felt a burning, confident intuition that the petroglyph was important and that I should pursue it."

This, then, is the dilemma of Archeoastronomy: What we see delights us and we feel a profound connection with those who came before. But when we look so far into the past, we must be sure our gaze is as reliable and impartial as possible. No matter how attractive a theory, if it is not supported by what we know of the culture, and if others have not independently confirmed it, then it must remain an intriguing mystery.

To check out a book from the EVAC library, contact properties manager Rick Scott at [rmscott@home.com](mailto:rmscott@home.com) or (480) 821-5721.

## If it's clear...

**By Fulton Wright, Jr.**  
*Prescott Astronomy Club*  
*for December 2000*

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.

Save the night of December 6/7, there is a lot to observe.

On Wednesday, December 6, between 5:30 PM and 1:00 AM you can see the northwest

part of the Moon at its best. Libration tips that part of the Moon toward us. It will also be good for a day on either side of that date.

On Wednesday, December 6, between 6:30 PM and 2:00AM you can see two asteroids very near each other. With a medium (6 inch) telescope look for SAO 92548 (magnitude 8) at RA 1h 38.5m, dec +13d 56'. About 5 arcminutes south and a bit east of this star are 30 Urania (toward the west) and 230 Athamantis (toward the east), both magnitude 10. The distance between them drops from 2 to 1 arcminute as the evening progresses.

On Thursday, December 7, at about 1:07 AM you can see Jupiter's three outer satellites lined up. This happens while Io and its shadow are on the planet. (See the December 6 entry in the table at the end of this article.)

On Tuesday, December 12 you can watch the just-past-full moon occult a magnitude 3.5 star. Delta Geminorum disappears on the bright side of the moon at 11:11 PM (hard to see without a big telescope) and reappears on the dark side at 12:07 AM as seen from Prescott (should be visible in a small telescope).

On Wednesday, December 20, you can see an entire occultation-eclipse sequence of Jupiter's satellite Ganymede. Here is the schedule:

- 7:14 PM Ganymede disappears behind Jupiter
- 9:10 PM Ganymede reappears from behind Jupiter
- 9:31 PM Ganymede disappears in Jupiter's shadow
- 11:39 PM Ganymede emerges from Jupiter's shadow

On Monday, December 25 (Christmas morning) between 8:35 AM and 10:30 AM, you can see a partial eclipse of the sun. At

maximum (around 9:30 AM) the Moon will intrude about 20% into the Sun. Be sure not to look directly at the sun (with or without optical aid) without a proper filter. A #14 welders filter is my favorite for unaided eye views or poke a pinhole in a piece of cardboard and project the image formed by your pinhole camera on another piece of paper.

Here is a table of when, before midnight, you will be able to see a shadow of a satellite on Jupiter.

Date	Start	End	Satellite
2	11:32 PM	1:37 AM	Ganymede
3	9:13 PM	11:49 PM	Europa
6	11:21 PM	1:31 AM	Io
8	6:03 PM	8:14 PM	Io
10	11:50 PM	2:26 AM	Europa
15	7:58 PM	10:09 PM	Io
22	9:53 PM	12:04 AM	Io
28	6:21 PM	8:57 PM	Europa
29	11:49 PM	2:00 AM	Io

## The Highlight of Solar System Exploration:

*Joint Observations of the Jovian System*

*By Galileo and Cassini*

**By Laurice Dee, Ph.D**

Reading EVAC newsletters is always a pleasure when interesting articles are included. It is my understanding that more diversified articles are needed for future newsletters, and there is no doubt that one would have a better understanding of solar system exploration and deep sky astronomy by reading a variety of space- and astronomy-related articles.

Although this is going to be my first article for the EVAC newsletter, I am more than happy to share the excitement of robotic solar system exploration with all of you. I am



sure there are some of you that have been following up on the various robotic missions that explore the Sun and planets in the solar system. Most of you, I believe, have already listened to my slide and poster presentations at the monthly meetings during the last few years. I usually cover various solar system missions in my talks.

While numerous current missions have been doing well in solar system exploration this year, the highlight is the concurrent observations of the Jovian system (i.e., Jupiter and its Galilean satellites) by the Galileo and Cassini missions. The observations started this past October and will continue until March 2001 when Cassini leaves Jupiter's vicinity. Let me share a little about these two interesting missions, just in case there are some of you that are not quite familiar with them.

Launched in October of 1989 aboard the Space Shuttle Atlantis, Galileo arrived at Jupiter on 7 December 1995. Galileo received gravitational boost from Venus (once) and Earth (twice) during its trip to the Jovian system. The boost was most needed, since it was not feasible to launch Galileo directly to the Jovian system due to high costs of launch vehicle and fuel. Named after Galileo Galilei, the discoverer of Jupiter's four largest moons, the strong and mighty spacecraft has been studying Jupiter's atmosphere, magnetic environment, and moons extensively since its arrival. Galileo already began its extended mission, called Galileo Millennium Mission (GMM), which is the continuation of its long and illustrious tour of the Jovian system. The veteran spacecraft has already been exposed to excessive amounts of radiation during the tour, but this has not stopped Galileo from continuing to gather interesting

data that have captured the excitement and fascination of the scientific community.

Cassini was lifted into space using a Titan IVB launch vehicle on 15 October 1997. Cassini has already received gravitational boost from Venus (twice) and Earth (once) and is nearing Jupiter for its final boost enroute to Saturn. The planned date for Cassini's arrival at Saturn will be 1 July 2004. Cassini will plan on fulfilling the following science objectives during its four years of touring the Saturnian system: Saturn's planetary structure and atmosphere; Saturn's rings; landing site for the Huygens probe; Saturn's multiple moons; and Saturn's huge magnetosphere. Named after both Jean Dominique Cassini, the discoverer of the large gap in Saturn's rings, and Christaan Huygens, the discoverer of Titan, one of Saturn's prominent moons, both Cassini orbiter and Huygens probe are currently in excellent health.

History "in the making" for both Galileo and Cassini began to unfold when Cassini started its observations of the Jovian system last month. Both Galileo and Cassini will spend most of their time studying Jupiter's huge magnetosphere and the solar wind that travels to the solar system from the Sun. Of this writing, Galileo and Cassini are currently flying outside of Jupiter's magnetosphere. When Cassini makes its close approach to Jupiter on 30 December 2000, Galileo will be traveling into the heart of the Jovian system for its flyby of Ganymede, one of the Galilean satellites. By the time Cassini leaves the Jovian system, Galileo will fly back out of Jupiter's magnetosphere. Galileo's data during its tour of the inner and outer magnetosphere, as well as outside of the magnetosphere, will be compared with the solar wind data that

Cassini will collect. Such comparison will help scientists understand the interactions between solar wind and Jupiter's huge magnetosphere and the effect of solar wind's intensity on the magnetosphere.

Both Galileo and Cassini will also study the Io Torus, structure and dynamics of Jupiter's rings and atmosphere, physical and chemical properties of the Galilean satellites, and Ganymede's own magnetosphere.

Both Cassini and the various schools that participate in the Goldstone Apple Valley Radio Telescope (GAVRT) program have already begun their concurrent observations of Jupiter's huge magnetosphere and radiation belts for calibration purposes (i.e., comparing Cassini's radiometer data with ground-based radio astronomy observations). The calibrations will allow a couple of Cassini's instruments (radar transmitter/receiver and Radio & Plasma Wave Science (RPWS)) to be used effectively for further Jupiter observations, as well as Saturn observations. The 34-meter antenna in Goldstone, CA has been used for data collection (i.e., radio astronomy observations) by the schools. This particular antenna was used for deep space communications with spacecraft traveling in space and was decommissioned in 1997. Educational institutions currently use it for interactive learning purposes.

After reading this article, you may want to check out the Cassini website, <http://www.jpl.nasa.gov/jupiterflyby/>, to see the interesting data that Cassini has already gathered while flying towards the Jovian system. Cassini took some fantastic images of Jupiter, and movies of the swirling planet were created from the images. The spacecraft also took spectral images with its Radio and

Plasma Wave Science (RPWS) instrument. You can't miss these cool images!

I do hope my article allows all of you the opportunity to know what has been happening with Galileo and Cassini. Never in the history of space would two spacecraft make concurrent observations of a planet. Both Galileo and Cassini are definitely making their milestone by observing together at the Jovian system. We will all hope for the best for these two spacecraft and that they will continue to bring back their interesting and enlightening scientific findings of Jupiter and its Galilean satellites!

## For Sale

Celestron Ultima 8, 8" SCT with Sky Wizard computerized setting circles and accessories, total paid \$3000. Sell \$1900. Mike  
480.839.3209

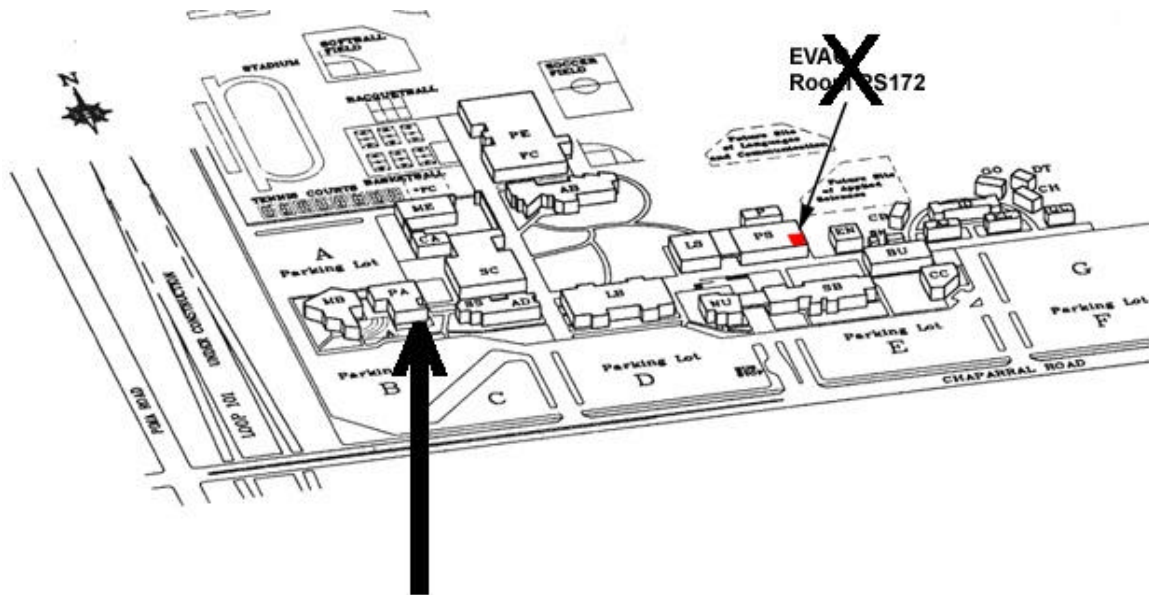
## Your Article Here!!

Do you have a great idea for the next newsletter? Perhaps you had a night of fantastic observing, or some interesting tips to share with the rest of the club? Maybe you even have a favorite piece of astronomical hardware that you use? Tell us all about it!! The newsletter is a great way to communicate with the rest of the club. We're always welcoming new articles and ideas. So if you are interested just drop Martin Bonadio an email: [mabastro@aol.com](mailto:mabastro@aol.com)

# EAST VALLEY ASTRONOMY CLUB (EVAC)

## MEETING LOCATION CHANGE

WEDNESDAY, DECEMBER 13 ONLY



MEET IN AUDITORIUM  
(BUILDING PA, SOUTHWEST CORNER OF SCOTTSDALE  
COMMUNITY COLLEGE CAMPUS, CORNER OF LOOP 101 AND  
CHAPARRAL ROAD. PARK IN LOT B.)

### SPECIAL SLIDE SHOW

At the December 13 EVAC meeting, Rick Scott and Joe Orman will present a **special slide show** with two computer-controlled projectors and a synchronized musical soundtrack. This 30-minute show, titled "**The Sky We Share**," will showcase the photography of club members Rick, Joe, Tom Polakis, Randy Peterson, and Chris Schur.

**MEETING STARTS AT 7:30 PM.**

**ALL ARE WELCOME!**





## East Valley Astronomy Club

### Membership Form

Please complete the information requested. Return at the next club meeting or to the address below, with a check made payable to EVAC for the appropriate amount due. **IMPORTANT!** Please note that ALL memberships expire on December 31 of each year.

1. Check one of the following: ( ) New Member ( ) Renewal

2. Select appropriate dues options:

**Send To:**

**New Member select month joining:**

- ( ) \$20.00 January - March
- ( ) \$15.00 April - June
- ( ) \$10.00 July - September
- ( ) \$ 5.00 October - December

EVAC Treasurer  
P.O. Box 2202  
Mesa, Arizona 85214-2202

**Member Renewals (current Members ONLY!)**

- ( ) \$20.00 Annual Renewal (January - December)

**Magazines: Provide renewals notices with payment.**

- ( ) \$29.00 Astronomy Magazine
- ( ) \$30.00 Sky & Telescope

**Name Badges**

- ( ) \$7.00 Each

\_\_\_\_\_ **Total Enclosed**

3. Complete requested information below. Please Print.

Name:

Address:

### EVAC on the Internet

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

#### E-mail Mailing Lists

**EVAC-mls** is a mailing list for club announcements and quick notification of astronomical events.

To join, send E-mail with the "Subject: subscribe" to [EVAC-mls-request@psiaz.com](mailto:EVAC-mls-request@psiaz.com)

**EVAC-Board** is for EVAC business. All club members are welcome to participate.

To join, send E-mail with the "Subject: subscribe" to [EVAC-Board-request@psiaz.com](mailto:EVAC-Board-request@psiaz.com)

**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-request@psiaz.com](mailto:AZ-Observing-request@psiaz.com)

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.

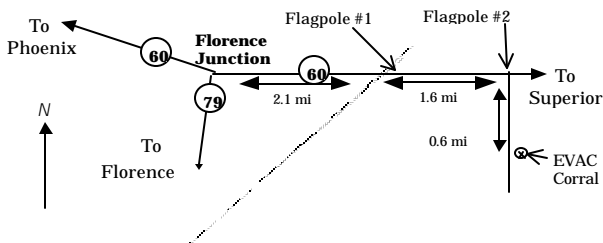
### EVAC Star Parties

#### 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 right before a gas-line sign.

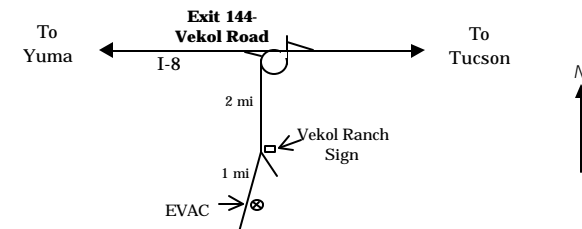


#### Deep Sky Star Party: Vekol Road Site

**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 1 1/2 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**  
Silvio Jaconelli  
(480) 926-8529

**VICE-PRESIDENT**  
Chuck Crawford  
(480) 735-8042

**SECRETARY**  
Tom Mozdzen  
(480) 497-5703

**PROPERTIES**  
Rick Scott  
(480) 821-5721

**NEWSLETTER/  
MEMBER  
DATABASE**  
Martin Bonadio  
(480) 926-4900

East Valley Astronomy Club—2000  
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 Martin Bonadio. Email—[mabastro@aol.com](mailto:mabastro@aol.com)

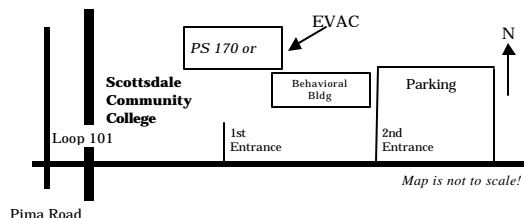
**Club Meetings:** Second Wednesday of every month at the Scottsdale Community College, 7:30 pm. Normally Room PS 170 or 172 in the Physical Sciences Building. See map below.

**Newsletter and Address Changes:** Contact Martin Bonadio 921 North Kingston Street, Gilbert, AZ 85233, (480) 926-4900. [mabastro@aol.com](mailto:mabastro@aol.com). Contributions may be edited. The Newsletter is mailed out the week before the monthly Club meeting. An electronic version available in Adobe PDF format in lieu of a printed copy. Please contact Martin with delivery your preferences.

**EVAC Library:** The library contains a good assortment of books, downloaded imagery, and helpful guides. Contact Rick Scott for complete details, (480) 821-5721

**Book Discounts:** Great savings through Kalmbach and Sky Publishing. Contact Martin Bonadio.

**EVAC Party Line:** Let other members know in advance if you plan to attend a scheduled observing session. Contact Stan Ferris, (480) 831-7307.



## **East Valley Astronomy Club**

**Martin Bonadio, Editor**  
921 North Kingston St. Gilbert, AZ 85233

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**Reminder: Next EVAC Meeting  
Wednesday, December 13, 2000  
MEETING CHANGE – SEE INSIDE!!**