

# East Valley Astronomy Club

November 1999

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

Scottsdale, Arizona

## Next Meeting: All EVAC Show and Tell (plus swap meet and social)

Please note that the Nov. 10 meeting will be our annual swap meet and social. There will not be a guest speaker. If you have any items for sale, please bring them to the meeting. Or, if you just have a cool toy you want to show off we will be happy to ooh and aww over it! Also bring a small table as our table space is limited. We will also have more time allowed for show and tell so bring your best photos to share.

This will be an excellent opportunity for you to get to know your fellow club members. Come and see who these people are that you talk to in the dark! It will be a fun time for all. There will also be some homemade goodies to munch while we visit. We hope to see you all on Wednesday.

Pedro

## Important Announcements

### New newsletter editor

Martin will take over for Tom starting with the December newsletter. Please send your material to Martin.

Martin Bonadio,  
921 North Kingston Street  
Gilbert, AZ 85233,  
480/926-4900.

[E.mail-mabastro@aol.com](mailto:E.mail-mabastro@aol.com)

### New Treasurer

Send Renewal, New Member, and Subscriptions to:  
Dee n Zacher

xyz Ave.

Mesa, Arizona 85204

## Upcoming Events

The Boyce Thomson Aboretum is holding another "Night Under the Stars" on Saturday, November 6th from 5:30 to 8:30 P.M. The usual pot luck buffet will be served. If you are interested in attending, please contact Don Wrigley at 982-2428.

The EVAC Christmas Party will be held at Martin Bonadio's house on December 18<sup>th</sup>. Stay tuned for more details next month.

The Messier Marathon will be held on Saturday, April 1, 2000 at the Arizona City site. So mark next years' calendar for this event. We will have more information in a few months.

AJ Crayon & Rick Rotramel  
Messier Marathon Coordinators  
Saguaro Astronomy Club

## EVAC & Other Events: 1999

	New Moon	Mtng	Local	Deep Sky	Other
Jan	17	13	9	16	
Feb	16	10	6	13	
Mar	17	10	13*	20	13: Messier Marathon*
Apr	16	14	10	17*	17: Sentinel Star Gaze*
May	15	12	8	15	9-16: Texas Star Party 28-31: Riverside TMC
Jun	13	9	5	12	12-19: Gr Canyon SP
July	13	14	3	10	1-7: Universe '99
Aug	11	11	7	14	13-14: Stellafane
Sep	9	8	4	11	10-11: N AZ Star Party 17-19: Astrofest
Oct	9	13	2 <sup>nd</sup> & 30 <sup>th</sup>	9*	9: All-AZ Star Party* 4-10: Okie-Tex SP 8-10: Starry Nights Fst
Nov	8	10	(oct)	6	Elections
Dec	7	8	11	4	Christmas Party - 18 <sup>th</sup>

# EVAC Meeting Highlights

October 13<sup>th</sup>, 1999

Tom Polakis, Secretary  
Polakis@sprintmail.com

The October meeting was attended by about 75 people. After visitor and Board member introductions, President Silvio Jaconelli introduced his wife Margaret to club, who acted as stand-in Treasurer for the meeting.

The main upcoming event of interest is a star party to be held at Scottsdale Community College on November 2. We need at least six telescopes, which we'll set up at the northeast corner of the campus. Remember that this is how we "pay" for the meeting room.

The Club is overdue for another tour of one of Arizona's astronomical attractions. The logistically easiest of these are Lowell Observatory or Kitt Peak National Observatory. We only need an organizer to step up. Contact Tom Polakis at the e-mail address shown above for pointers. He will be able to set up any potential tour organizers with contacts.

Sheri Cahn gave information about a reception for the Vatican Observatory to be held on November 4.

The next item was filling the offices for 2000. Thanks to the efforts of the EVAC board members, this item is not the tooth-extracting procedure it once was. All offices except for Vice President now have one candidate up for the November election. Any volunteers for serving in an office for next year are appreciated.

Some club announcements followed. Gene Lucas mentioned two upcoming conferences related to CCD imaging. One has already occurred. The other is named "Imaging the Sky '99", and will be held November 4 and 5 in Salem, Oregon.

Win Pendelton, formerly of the Central Florida Astronomical Society was impressed by our well-attended meeting. His old Orlando club has 400 members, but scarcely half our turnouts. He discussed a monthly astronomy program that will be held at the new Nature Park Library in Gilbert on the second Friday of each month. Silvio Jaconelli will likely be able to help if you're interested in participating.

Tom Polakis announced that the Christmas party will be held at Martin Bonadio's house. Martin has announced a date of Saturday, December 18. More details are forthcoming in the next meeting and newsletter.

Diana Jane' has begun compiling an excellent book for club events. It includes signatures and photographs, and is certainly a work in progress. Don Wrigley announced that the next Boyce Thompson Arboretum star party is November 6. Contact Don for

details. Bill Peters encouraged members to use Haloween as a night to conduct sidewalk observing for the public. He also mentioned that on Sunday, October 24, there would be an asteroid occultation with a good probability of an event in Phoenix. Steve Bell encouraged people to view the transit of Mercury, slated for November 15.

The main speaker was club favorite Dr. Paul Scowen, of ASU. His talk was about Wolf-Rayet stars, which are responsible for some of the brightest (and windiest) nebulae. He spoke at great length about his research on NGC 6888, known to us amateurs as the Crescent Nebula. By refining computer models, he is able to describe the structure of this complex object. Hubble Space Telescope images in the lines of Sulfur II, Hydrogen-alpha, and Oxygen III describe different degrees of ionization that provide clues about these exotic nebulae. His second example was NGC 7635, which also has a name: the Bubble Nebula. After fielding questions, Dr. Scowen solicited club help for his work with an elementary school astronomy club. They are building a telescope, and he needs components. Anybody who can donate parts for a telescope should contact him at [paul.scowen@asu.edu](mailto:paul.scowen@asu.edu).

## Treasurer's Message

By DA Zacher - treasurer

Membership renewal time is coming fast. Last month 25 membership renewals, and 7 magazine subscriptions were received. Lets try to exceed that number this month! Please fill out a membership form when renewing, and circle the word 'Renewal' on the form - if you are a new member circle 'New Member.' The form for New / Renewal Memberships is included with the monthly newsletter, provided at the monthly meetings, and available on the EVAC Web site: (<http://www.eastvalleyastronomy.org/>).

Many of us have subscriptions through the club for 'Astronomy' and 'Sky & Telescope.' Send your renewals early, to prevent interruption of service. Also, please include the renewal notice when submitting the funds.

### Astronomy Calendars

The November meeting will be the LAST opportunity to order Astronomy Calendars. They cost \$7.00 each. Currently only 6 people have signed up. Only ten extra calendars will be ordered! Please remember, calendars can only be reserved for those who have paid before the calendars arrive.

# Message from the President

by Silvio Jaconelli

I would like to thank Anne Beeby for her efforts on the EVAC clothing arrangements - the quality of the clothing that Anne got for us was top class. If anyone wants to run with the baton on this, please contact Anne. Anne's other commitments prevent her from pursuing this further. Any volunteers out there?

I had a most enjoyable time mid-Oct with the Riparian Society - I set up my telescope at the official opening of the new Gilbert library for 4 hours during the middle part of the day and showed literally hundreds of people sun spots and Venus - we had a great reaction. We should help promote our hobby by taking it to the community at large; that way, we can help promote public awareness and sympathy for our cause.

Don't forget that we will be electing our officers and Board members for the first year of the new millennium (oops, was that a mis-statement of fact?); although we have got all positions covered, we will greatly welcome anyone who wishes to hold office - the November meeting is the place to put yourself forward.

Until the October meeting .....

Silvio Jaconelli  
EVAC president

## SETI@home Update

by Tom Mozdzen

EVAC members continue to crunch. Our stats:

Month	Members	Results	CPU yrs
August	11	866	2.8
September	17	2299	6.6
October	20	4213	10.4

### Seti Performance Tips:

Follow all of these steps to avoid the resource intensive graphical display of the SETI screensaver.

1. Enable SETI to always run in the background
2. Disable your screensaver.
3. Minimize SETI
4. Exit any program you are not using.

This can decrease your time required to compute a packet of data by a factor of 2. If your computer becomes sluggish, then go back to the screensaver enabled.

The key is to avoid having SETI use your computing resources to generate the graphical

display, and instead let SETI use your compute resources to process the data in the background.

### SETI enhancements in the works

Big enhancements are coming for SETI! I have been using a beta version that has reduced the time to process a packet of data from 20hrs to just 6 hrs! (assuming you don't display the seti graphic.) I expect the version to be released in the next month or two.

There is also work in progress to let you display the graphic without spending much computing power. Also, we think there is a better "connection" interface coming. Hopefully it will be more along the line of Juno, where it dials and hangs up for you very reliably.

Our current individual progress:

	Name	Num. of Results	Total CPU time (hrs)
1)	Bob Brazeal	1944	3.9 yrs
2)	Dan Hawrylkiw	706	1.6 yrs
3)	Evan Pomerantz	316	4753
4)	MikeHarrell	192	8716
5)	Kirk Keating	160	4362
6)	Mozdzen	145	2343
7)	Rick Scott	123	2635
8)	Marcia Collette	86	3520
9)	Jason B. Nelson	83	3222
10)	Wes Edens	77	1374
11)	Martin Bonadio	73	2752
12)	Paul S. Edgecomb	73	969
13)	Jon Milan	70	1395
14)	D. A. Zacher	50	1566
15)	jtwaters	45	1118
16)	Chris	34	859
17)	Ron Williams	32	1877
18)	Don Tellis	25	850
19)	Bob Lindquist	9	1001
20)	Matthew Spinelli	6	487

To view our results in real time goto:

[http://setiathome.ssl.berkeley.edu/cgi-bin/cgi?cmd=team\\_lookup&name=East+Valley+Astronomy+Club](http://setiathome.ssl.berkeley.edu/cgi-bin/cgi?cmd=team_lookup&name=East+Valley+Astronomy+Club)

To download the free software goto:

<http://setiathome.ssl.berkeley.edu>

Let's try to get to 25 members total this month. Tell your friends to sign up for East Valley Astronomy Club and help us make a run for a spot on the top 100 club list.

Tom Mozdzen

# Choosing a Telescope

by Martin Bonadio

[mabastro@aol.com](mailto:mabastro@aol.com)

<http://members.aol.com/mabastro>

Earlier this year (August 1999) our infamous president, Mr. Silvio Jaconelli, wrote an article in response to a new member's desire to make a telescope purchase decision. I thought I'd share a few of my own opinions on the topic this month...

The first thing I will say is that there are no right and choices, and everyone has an opinion. I'll try to stay impartial and factual, but interject my own opinion and experience as well. Choosing a telescope should be a lot like purchasing a car. You have to look at the different models, test drive a few, decide what feels right, and then buy something that fits your budget. It can be rather confusing at times can't it?? Well, maybe not. You have to do your homework first, right?

So how does one make a wise telescope decision? Well, the first thing I'll say is that an astronomical telescope is a specialized scientific instrument. It was designed for one purpose: gathering light. Ask a seasoned astronomer and he'll tell you that "aperture wins". (Aperture refers to the size of the primary objective). Ok, I'll buy that, but to some extent. But, take the Hubble telescope for example; it's several times smaller than many earth-based professional instruments, yet it performs better. Why is that? Without getting into too much detail - it is a specialized instrument. It was designed to take high-resolution images from space - it's main claim to fame is the fact that it doesn't have our atmosphere to contend with. Are you ready to launch your scope into space now?? Me too. Maybe later.

So, we are already realizing that there are limitations. What else should you know? Well how about light pollution. Many of us in the club talk about this all the time. It's a factor. Purchase too big of a telescope, use it in the wrong place, and you might start collecting the wrong kind of light. So if you're a city observer you need to buy a telescope that is "geared" for that purpose. NASA certainly wouldn't spend your tax dollars to fire a gigantic observatory sized telescope into orbit would they?? (Ok, I'll leave that alone).

Now, I need to explain a few things about common telescopes. And again, I'm not going into a lot of detail here. First there is the simple refractor telescope. Relatively small aperture, and generally makes a good city scope, and is excellent for planetary work. Few reflective surfaces result in crisp clear images. There is also nothing to adjust so it's appealing to the beginner. However, the price-to-aperture ratio is very high. Next there is the reflector (Dobsonians and Newtonians). A simple design that has a few mirrors and requires some periodic adjustments (collimation)

to make it perform well. Costs are inexpensive - especially on the no-frills Dobsonian mounts. A reflector will likely have more aperture, and with that comes size and bulk. The third major grouping is the Catadioptric. Sounds fancy, huh? Yes, and the price tag is relative, but generally less expensive than a similar sized refractor. These incorporate designs from the reflector and refractor to provide the user with more aperture and a more compact design. No mistaking the fact that they can still be a little heavy in larger apertures. You'll also pay for this - especially if computerized. But for some people - perhaps convenience is a factor.

So, have I lost you yet? I hope not. It's time to help you make a decision. I've given you the basis for fact finding. Now it's your turn. I'll end this article with a few of my tips:

1. Try before you buy. Get in touch with other club members. Go to star parties. The telescope you buy is only as good as you think it is. If you don't like the view through it why buy it?
2. Decide what kind of viewing you want to do? Analogy: Don't buy a Yugo if you want to 4x4 in the desert.
3. Don't get carried away with size. One of the keys to choosing a telescope is finding something you're willing to use. If it weighs 200lbs are you willing to take it outside and use it night after night? The same goes for complexity. If the telescope is computerized, or has a lot of parts needed to set it up in the field are you willing to invest the time to assemble and dismantle it each time you use it? A telescope will do you no good if it ends up in your closet. So, consider a smaller aperture telescope the first time around, and learn the ropes. Then when you're more experienced, and can safely say your committed you can buy something heavier, bulkier, or that requires more assembly time.
4. Aperture generally does win (optical quality counts too). So get the largest scope that applies. However, don't go overboard. A 30" Dobsonian aimed at Jupiter can ruin your night vision! Not too mention the glare it creates will certainly reduce the amount of contrast in the subject - and contrast is equally important to brightness in planetary viewing. Contrary, a larger scope will make a faint object more easily visible. A 3" refractor isn't well suited for looking at extremely faint galaxies - get out your 30" Dobsonian for that!! (Or take up astrophotography!! Grin).
5. Save your money, and buy the best scope you can afford. You don't need a loan. But shop wisely. Don't skimp. It's worth waiting a few extra months if you can get what you want.

Consider a used instrument from a fellow club member. If you followed tip#1 you're already happy with the view, right???

6. Talk to other people – that's what the club's for. Ask people why they made their choice, etc. There are a few really good astronomy stores in the valley. Astronomy Shoppe in North-Phoenix, and Mr. Telescope in Central Phoenix.
7. Buy a good beginners book. One of my favorites is NightWatch by Terrance Dickenson.
8. Finally – remember to have fun. That's the goal right? Just like any hobby, you won't enjoy it if you immerse yourself in too much detail. Like many of us, you may find that you'll want a second, or even third scope as the years pass. That's ok. You may grow into this hobby, or into more specialized observing patterns. Don't worry about that today.

Next time... I'll tell you how to get started in your observing endeavors. In the mean time, attend a lot of star parties and look through a lot of other people's scopes until you feel comfortable with a particular type.

## The 1999 All-Arizona Star Party

*October 8 & 9th, 1999*

by Martin Bonadio  
[mabastro@aol.com](mailto:mabastro@aol.com)

This year's star party was held at a location about 17 miles outside of Arizona City, Arizona on the private property of Mr. Ray Farnsworth. I want to thank those who attended this year. A **special thanks goes out to Pedro and Diana Jane'** who both worked really hard to make it a success. As well, Mr. Ray Farnsworth allowed us to put a Hubble skycap his "security light". A few people even asked if he had taken it down or turned it off!

The skies were very dark there, and there was only marginal sky glow from Phoenix, Casa Grande, and Tucson. The observing site was on a huge open dirt field. Needless to say there was a lot of dust from cars and people moving about. My equipment definitely had the "look" of a great battle when I got home. I certainly got my exercise from wandering around all night, and nearly got lost in the dark once while travelling back from the rented "port-a-john".

About 15 people arrived on Friday evening to enjoy 2 days of viewing. I arrived early on Saturday afternoon, and at that time about 20 people were already there. I parked at a location near our "Starry Nights" software winner Sean Page, and listened to him and a couple from Colorado singing "Credence Clearwater Revival" songs while I setup my tent, and equipment. After that I began to meander about the site greeting people, taking pictures, and chatting. The swap meet never really materialized, although I did manage to meet a gentleman from SAC trying to sell his tripod/equatorial head at his camper.

Throughout the day more people arrived, and at dusk I counted 65 vehicles. Several more arrived past dusk, but by that time I was busy sighting my scope on Kitt's Peak about 35 miles to the south. About 60 people camped out on Saturday night, and began meandering out of their tents to pack up and head home on Sunday AM.

Estimates put the total attendance somewhere around 120 people, with 80 telescopes. There were quite a variety of telescopes setup, and the entire spectrum of experience to accompany it. I was very pleased at the number of people just starting out in the hobby who stopped by my telescope, asked questions, and learned a lot from the experience. It's a long drive from some parts of the state! What a way to get started in the hobby!!

Many of us stayed up way past our bedtime. In fact Bill Peters, Sam Herchak, Pedro Jane', and myself were comet hunting well past 3am!! (We successfully found J3/Linear, and H1/Lee). As well an interesting Jupiter occultation of a ~9th magnitude star occurred at ~11:38. The star was still visible through Jupiter's atmosphere for nearly 8 minutes after the occult. A very nice treat!! The seeing was great at times too. David Rainey reported detecting the Crepe rings around Saturn, and I was able to clearly make out contrast within the Red Spot of Jupiter as it transited shortly after the occult. Many of the deep sky objects on my observing plan were very "contrasty", and I certainly felt spoiled by the dark skies and excellent company. In particular the number of meteors that left trails in the sky was quite high during the night. Several very bright ones were spotted, and numerous faint/short ones as well.

For anyone interested I have posted several pictures on my web site documenting the event. Please feel free to stop by and check it out. The URL is <http://members.aol.com/mabastro>. Choose the ALL-AZ tab from the menu to open the page. With that said, I hope to see everyone again next year, and for those who couldn't make it – let's shoot for 200 attendees next time.

## If it's clear...

by Fulton Wright, Jr.

Prescott Astronomy Club for November 1999

Shamelessly stolen information from Sky & Telescope magazine, Astronomy magazine, and anywhere else I can find data.

On Thursday, November 4, after sunset you can see some events with Jupiter's moons. Here is the schedule:

5:22 PM Ganymede transits, Jupiter is 6 degrees above east horizon  
5:25 PM Sun sets  
5:41 PM Io transits  
6:00 PM Io's shadow falls on Jupiter (1 shadow)  
6:31 PM Ganymede's shadow falls on Jupiter (2 shadows!)  
7:12 PM Ganymede transit ends (still 2 shadows)  
7:50 PM Io transit ends (still 2 shadows)  
8:10 PM Io's shadow leaves (down to 1 shadow)  
8:42 PM Ganymede's shadow leaves (no more shadows)

On Thursday, November 11, after sunset you can see some events with Jupiter's moons.

Here is the schedule:

7:25 PM Io transits  
7:55 PM Io's shadow falls on Jupiter  
8:39 PM Ganymede transits  
9:34 PM Io transit ends  
10:05 PM Io's shadow leaves  
10:33 PM Ganymede transit ends  
10:33 PM Ganymede's shadow falls on Jupiter (same time!)  
1:44 AM Ganymede's shadow leaves

On Monday, November 15, in the afternoon you can see a transit of Mercury. With a small (3 inch) or medium (6 inch) telescope PLUS A SAFE SOLAR FILTER, look 30 degrees above the southwest horizon for the sun. (You shouldn't have any trouble finding it.) The silhouette of Mercury will be small (10 arcseconds) and will barely pass onto the sun's disk (A maximum of 6 arcseconds of sun showing between the two object's limbs). All the action takes place near the celestial north-northeastern edge of the sun.

Here is the schedule:

2:11 PM First contact. Edge of Mercury touches the edge of the Sun, very hard to observe.  
2:23 PM Second contact. All of Mercury is in front of the Sun.  
2:41 PM Middle  
2:58 PM Third contact. Mercury starts to leave.  
3:10 PM Fourth contact. The show is over.

On Wednesday-Thursday, November 17-18, after midnight you might see the Leonid meteor shower.

Predicting meteor showers is not an exact science. It might be that not much will happen. However, there is a small chance it will be sensational. The flashy part (if it happens) may last for only an hour. At about 11:45 PM the radiant in Leo rises and our window of opportunity opens. At about 1:45 AM the moon sets and our window gets cleaned so we can see better. At about 6:00 AM twilight closes our window. Dark place, dress warmly, face east, lie down, look up, good luck.

On Thursday, November 18, in the evening you can see some events with Jupiter's moons.

Here is the schedule:

9:11 PM Io transits  
9:50 PM Io's shadow falls on Jupiter  
11:20 PM Io transit ends  
11:57 PM Ganymede transits  
12:00 AM Io's shadow leaves (3 minutes later)  
1:56 AM Ganymede transit ends  
2:35 AM Ganymede's shadow falls on Jupiter  
4:41 AM Jupiter sets, shadow still on it

## NASA News

Collected by Martin Bonadio

### Chandra spies structure of huge X-ray jets

The Chandra X-ray Observatory has made an extraordinary image of Centaurus A, a nearby galaxy noted for its explosive activity. The image shows X-ray jets erupting from the center of the galaxy over a distance of 25,000 light years. Also detected are a group of X-ray sources clustered around the nucleus, which is believed to harbor a supermassive black hole. The X-ray jets and the cluster of sources may be a byproduct of a titanic collision between galaxies several hundred million years ago.

Dr. Ethan Schreier of the Space Telescope Science Institute explained that the length and shape of the X-ray jet pinned down the source of the radiation. The entire length of the X-ray jet is comparable to the diameter of the Milky Way Galaxy.

Other features of the image excite scientists. "Besides the jets, one of the first things I noticed about the image was the new population of sources in the center of the galaxy," said Dr. Christine Jones from the Harvard-Smithsonian Center for Astrophysics. "They are grouped in a sphere around the nucleus, which must be telling us something very fundamental about how the galaxy, and the supermassive black hole in the center, were formed." Astronomers have accumulated evidence with optical and infrared telescopes that Centaurus A collided with a small spiral galaxy several hundred million years ago. This collision is believed to have triggered a burst of star formation and supplied gas to fuel the activity of the central black hole.

At a distance of eleven million light years from Earth, Centaurus A is a favorite target of astronomers

because it is the nearest example of an "active galaxy". These are noted for their explosive activity, which is presumed to be due to a supermassive black hole in their center. The energy output due to the huge central black hole can in many cases affect the appearance of the entire galaxy.

### **Closest-ever pictures of Io**

While just 671 km above Io, Galileo snapped a high-resolution picture of a lava field near the center of an erupting volcano. This is the closest-ever image of Jupiter's moon Io, and shows a lava field near the center of an erupting volcano. The image was taken from an altitude of 671 kilometers (417 miles) and is 50 times better than the previous best, taken by the Voyager spacecraft in 1979.

Visible in the image are new lava flows from the volcanic center named Pillan, an area with erupting lava hotter than any known eruption that occurred on Earth within billions of years. Scientists will be studying this image to determine the characteristics of the eruption, along with other data due to be sent back by the spacecraft in coming weeks.

### **Hubble reveals source of UV light in old galaxy**

Observations by the Hubble Space Telescope have allowed astronomers to resolve, for the first time, hot blue stars deep inside an elliptical galaxy. The swarm of nearly 8,000 blue stars resembles a blizzard of snowflakes near the core (lower right) of the neighboring galaxy M32, located 2.5 million light-years away in the constellation Andromeda. "The Hubble data confirms that the ultraviolet light comes from a population of extremely hot helium-burning stars at a late stage in their lives", NASA said in a statement. "Unlike the sun, which burns hydrogen into helium, these old stars exhausted their central hydrogen long ago and now burn helium into heavier elements."

Over the years since the initial discovery of this unexpected ultraviolet light, indirect evidence has accumulated that it originates in a population of old, but hot, helium-burning stars. Now Hubble provides the first direct visual evidence.

Nearby elliptical galaxies are thought to be relatively simple galaxies comprised of old stars. Because they are among the brightest objects in the Universe, this simplicity makes them useful for tracing the evolution of stars and galaxies, astronomers at the Space Telescope Science Institute said.

# **Adopt-a-highway Cleanup Report**

by Martin Bonadio

This fall's cleanup effort was another great success. A group of 10 EVAC members arrived ~8am on Saturday, October 23rd to remove trash from the section of highway at Florence Junction marked by the "East Valley Astronomy Club" signs.

The cleanup effort only took about 2 hours to complete, and was concluded with an excellent lunch at the Village Inn in Apache Junction. Randy Peterson is the General Manager at this restaurant and took good care of the club's needs (even though he wouldn't give us anything for free). Furthermore, there was lots of great socializing, and would you believe quite a bit of talk about telescopes? Imagine that.

In total 18 Bags were filled, and several interesting treasures were collected. I found a nice pair of handcuffs, which I promptly attempted to use on Pedro Jane. This coming after he found a small yellow chair and proceeded to try and supervise the operation from his new perch. David Rainey extricated a small snake from a hole in the ground only to find out that it was a bunji cord instead, (Sorry David, no one fell for this trick!).

The club wants to recognize and thank those who participated in the cleanup effort as follows: Martin Bonadio, Joe Goss, Pedro Jane, Silvio Jaconelli, Ken Levy, David Rainey, Jack Schroeder, Jim Weisenberger, Don Wrigley, and Dee Ann Zacher. Everyone did excellent work!!!

When completed twice a year with such good attendance, the cleanup effort is an easy job and always turns out to be a good time. Hope to see you there the next time. The next scheduled cleanup is for sometime this coming spring. Details will be forthcoming.

## **Photos Wanted**

**Photos (by amateurs) of the planets and moon wanted (possibly comet photos also)**

My pen pal in Italy, a serious amateur who has written 3 books on astronomy and has articles published in Italy's version of S&T, Orione magazine, needs 4-5 photos (not CCD's) of planets, high magnification moon photos for an April 2000 article. These need to be astrophotos taken through a telescope by an amateur. He will pay \$25 per photo. Call Bill Dellinges at (480) 983 6651 or email at [stargzr@prodigy.net](mailto:stargzr@prodigy.net)

# Learning the 88 Constellations

(with a little help from Curious  
George's Author)

by Tom Mozdzen

As a relative novice in amateur astronomy, I've tried to learn the constellations so that when I look up in the night sky on a random night, I can get my bearings. After having learned about half of them, I then moved on to learn the 109 Messier Objects.

Finding the Messier Objects has been a great exercise in really learning the constellations I thought I already knew, and learning about the other fourth I never knew existed. The last fourth need to be saved for a trip to South America or Australia.) When I line up the Telrad circles on stars in Sagitarius, for example, it turns out there are many other stars in Sagitarius that I need to know.

Being a perfectionist, I decided I needed to "find" and "learn" the rest of the constellations. After all, this should be much easier because there are only 88 constellations as compared to the 109 Messier (or the Best 110 SAC NGC.) As an added bonus, there must be a handful that I don't even have a chance of seeing just because I live in the northern hemisphere.

The task was to find which constellations are visible from Arizona, which ones are on the horizon and possibly only partially visible, and which ones are "positively visible". I needed to find a book that wasn't stuffy and dry, but was geared toward someone really trying to learn the constellations.

In a visit to **Dick's Astronomy Shoppe** in Northern Phoenix, a book happened to catch my attention that looked somehow familiar. The book was simply titled, "**The Stars**", and was very readable and thorough. The style of the hand drawn text and drawings finally clued me in that the Author, **H.A. Rey**, was the same H.A. Rey who wrote the children's book series, "**Curious George**".

Not only does he cover the groupings of the constellations in an order that makes some sense of the legends and stories behind the names, but he also redraws the lines connecting the major stars so that they actually look like what they are named after.

I've tried to organize the material into a checklist (see the following tear out page) to help keep track of those that I can identify. I've grouped the southern constellations so that I wouldn't waste time trying to find these, and I've grouped those that are low on the horizon and may pose problems. Listed after the Latin name is the English name, to help in understanding what you are looking for. I've then listed the best months to view the particular constellation based upon "**The Stars**". Of course the constellations can still be seen a month or two either side of the "best time".

There are a few that H.A. Rey calls "modern constellations" that are very boring and have only one or two stars visible. I didn't list these as the reader can decide for him/herself which are not worthy.

I still have a few more to learn, so you will find me with my checklist and book on star party nights. My daughter likes referencing this book also when she goes out to star parties with me. The sky opens up for her and she enjoys the activity of identifying the constellations.

I would highly recommend this book to anyone: beginners and even those who consider themselves well versed in the constellations.

## For Sale

**Celestron G5 5" SCT w/motor drive 9 months old, still under warranty 25mm eyepiece, star diagonal, acc. tray, alum tripod, equatorial mount, original box with all accessories.**

New cost - \$899 Asking \$600 OBO

George Kolb - EVAC member  
480-

**Edmund Astroscan w/28mm RKE eyepiece.**

Extremely portable 4.5" f/4 reflector. Three degree field of view. Excellent condition \$200. Replaced by homebuilt 6" RFT.

Contact Sam Herchak (480) or  
[76627.3322@compuserve.com](mailto:76627.3322@compuserve.com)

**Tele Vue Panoptic 35MM Eyepiece -**

Original Cost \$372 Asking: \$245 OBO

**Tele Vue Panoptic 27MM Eyepiece -**

Original Cost \$337 Asking: \$220 OBO

**20mm Type II Nagler -**

Original Cost \$405 Asking \$260 OBO

All items are less than 6 months old and include the original Tele Vue shipping containers and eyepiece end caps.

Call Jim at (480) for more information.

**10" f/6.3 Newtonian on Dob mount, Telrad plus 8x50**

finder scope, 25mm eyepiece, \$350

Meade OR 4mm eyepiece \$30

Celestron Plossl 45mm eyepiece \$40

Art 480.

## Wanted

**Telrad (without base) in excellent condition.**

Will pay \$ 20.

Silvio 602- (daytime).



Northern Constellations

No.	Latin Name	English Name	best mos.	Can Identify
1	Andromeda		9-1	
2	Aquarius	Water Carrier	8-10	
3	Aquila	Eagle	7-10	
4	Aries	Ram	10-2	
5	Auriga	Charioteer	10-4	
6	Bootes	Herdsman	4-8	
7	Camelopardalis	Giraffe	11-3	
8	Cancer	Crab	1-5	
9	Canes Venatici	Hunting Dogs	2-6	
10	Canis Major	Big Dog	1-3	
11	Canis Minor	Little Dog	12-5	
12	Capricornus	Goat	8-10	
13	Cassiopeia		8-1	
14	Cepheus		8-1	
15	Cetus	Whale	10-1	
16	Coma Berenices	Berenice's Hair	4-8	
17	Corona Borealis	Northern Crown	4-8	
18	Corvus	Crow	4-5	
19	Crater	Cup	4-5	
20	Cygnus	Swan	6-11	
21	Delphinus	Dolphin	7-11	
22	Draco	Dragon	6-10	
23	Equuleus	Little Horse	7-11	
24	Eridanus		11-3	
25	Gemini	Twins	12-5	
26	Hercules		5-10	

No.	Latin Name	English Name	best mos.	Can Identify
27	Hydra		2-5	
28	Lacerta	Lizzard	8-12	
29	Leo	Lion	2-6	
30	Leo Minor	Little Lion	2-6	
31	Lepus	Hare	1-3	
32	Libra	Scales	5-6	
33	Lynx		1-5	
34	Lyra	Lyre	5-11	
35	Monoceros	Unicorn	1-3	
36	Ophiuchus	Serpent Holder	7-8	
37	Orion		12-3	
38	Pegasus		8-1	
39	Perseus		11-3	
40	Pisces	Fishes	10-1	
41	Sagitta	Arrow	7-11	
42	Sagittarius	Archer	7-8	
43	Scorpius	Scorpion	7-8	
44	Scutum	Shield	7-10	
45	Serpens	Serpent's Head	7-8	
46	Sextans	Sextant	2-5	
47	Taurus	Bull	10-3	
48	Triangulum	Triangle	9-1	
49	Ursa Major	Great Bear	2-6	
50	Ursa Minor	Little Bear	6-10	
51	Virgo	Virgin	4-5	
52	Vulpecula	Little Fox	5-11	

Low Constellations

No.	Latin Name	English Name	best mos.	Can Identify
1	Antlia	Pump	4-5	
2	Caelum	Chisel	1-2	
3	Centaurus	Centaur	4-5	
4	Columba	Dove	1-3	
5	Corona Australis	Southern Crown	7-8	
6	Fornax	Furnace	12-1	
7	Grus	Crane	9-11	
8	Horologium	Clock	12-2	
9	Lupus	Wolf	6-7	

No.	Latin Name	English Name	best mos.	Can Identify
10	Microscopium	Microscope	8-10	
11	Norma	Square	7-8	
12	Phoenix		9-11	
13	Piscis Austrinus	Southern Fish	9-11	
14	Puppis	Ship's Stern	1-3	
15	Pyxis	Ship's Compass	2-4	
16	Sculptor		10-12	
17	Telescopium	Telescope	7-8	
18	Vela	Ship's Sail	3-5	

Southern Constellations

No.	Latin Name	English Name	best view	Can Identify
1	Apus	Bird of Paradise		
2	Ara	Altar		
3	Carina	Ship's Keel		
4	Chamaeleon	Chameleon		
5	Circinus	Dividers		
6	Crux	Southern Cross		
7	Dorado	Swordfish		
8	Hydrus			
9	Indus	Indian		

No.	Latin Name	English Name	best view	Can Identify
10	Mensa	Table Mountain		
11	Musca	Fly		
12	Octans	Octant		
13	Pavo	Peacock		
14	Pictor	Easel		
15	Reticulum	Net		
16	Triangulum Australe	Southern Triangle		
17	Tucana	Toucan		
18	Volans	Flying Fish		



# East Valley Astronomy Club

## Membership Form

Please complete the information on the form and return to the address below along with a check payable to EVAC for the appropriate dues amount. Allow 3 mos. leadtime for magazine renewals. See below:

Enclosed:

Dee Ann Zacher  
 EVAC Treasurer Ave  
 Mesa, Arizona 85204  
 (480)

- \_\_\_ \$20 Annual
- \_\_\_ \$10 July—Dec
- \_\_\_ \$29.95 Sky & Telescope
- \_\_\_ \$29 Astronomy Magazine
- \_\_\_ \$ 7 EVAC Nametag
- \_\_\_ Total

Circle: New Member Renewal

Please Print (indicate confidential information)

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 \_\_\_\_\_  
 Phone \_\_\_\_\_  
 Email \_\_\_\_\_  
 URL \_\_\_\_\_

How did you hear about EVAC? \_\_\_\_\_

Major areas of interest (circle): General observing; Lunar/Planetary;  
 Deep Sky; Telescope making; Astrophotography; CCD/Computer;  
 Archaeoastronomy; Other: \_\_\_\_\_

### 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.

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

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 the "request" mailing address at [psiaz.com](mailto:psiaz.com).

For example, you would send the request for AZ-Observing 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.

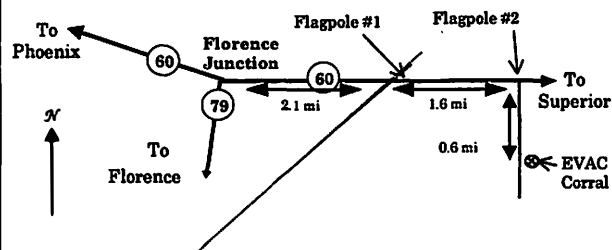
## EVAC Star Parties

### 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.

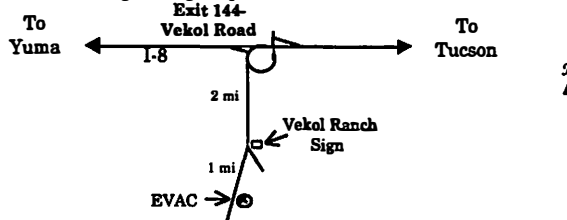


### Deep Sky Star Party: Vekol Road Site

**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 skyglow 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.



# East Valley Astronomy Club—1999

Scottsdale, Arizona

EVAC Homepage—<http://www.eastvalleyastronomy.org>

## EVAC Officers

**PRESIDENT**  
Silvio Jaconelli  
(480) 926-8529

**VICE-PRESIDENT**  
Pedro Jane'  
(602) 833-2002

**TREASURER**  
Dee Ann Zacher  
(480) 545-8769

**SECRETARY**  
Tom Polakis  
(480) 967-1658

**PROPERTIES**  
Enrico Alvarez  
(602) 837-0486

**Membership & Subscriptions:** \$20 per year, renewed in December. Reduced rates to *Sky & Telescope* and *Astronomy* available. Contact Dee Ann Zacher, Email—[dazacher@uswest.net](mailto:dazacher@uswest.net)

**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.

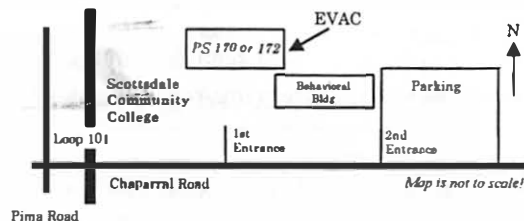
**Newsletter:** Mailed out the week before the monthly Club meeting. Send contributions to Martin Bonadio 921 North Kingston Street Gilbert, AZ 85233, 480/926-4900. [mabastro@aol.com](mailto:mabastro@aol.com). Contributions may be edited.

**Address Changes:** Contact Bill Smith, 3430 N. Mountain Ridge Unit 32, Mesa, AZ 85207, 602/854-8071. Email—[bsmithaz@aol.com](mailto:bsmithaz@aol.com)

**EVAC Library:** The library contains a good assortment of books, downloaded imagery, and helpful guides. Contact Enrico Alvarez for complete details, 602/837-0486.

**Book Discounts:** Great savings through Kalmbach and Sky Publishing. Contact Dee Ann Zacher, club treasurer.

**EVAC Party Line:** Let other members know in advance if you plan to attend a scheduled observing session. Contact Stan Ferris, 602/831-7307.



## East Valley Astronomy Club

Tom Mozdzen, Editor

1532 West Sherri Drive • Gilbert, AZ 85233



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Valued member since 3/16/97  
Next EVAC Meeting — Nov. 10th 7:30 pm

Next EVAC Meeting Reminder:  
Wednesday, November 10<sup>th</sup>

85228+1445

