



East Valley Astronomy Club

May 2001

www.eastvalleyastronomy.org

Scottsdale, Arizona

Adopt-a-Highway Report

By Martin Bonadio

On Saturday, April 14th, members of EVAC met at Florence Junction for the bi-annual trash cleanup. Fortunately, the weather cleared up and we were treated to a really nice morning.

I would like to thank the following members and guests who participated: David Coshow, Bonnie Merchant, Jack Grbcich, Jon Milan, John & Cathy Matthews, Joe Cameron, Ken Levy, Rich Peters, Win Pendleton, Murilo Fulco, Jim & Chris Kline, and Mort Hanlon.



Our efforts have even started to gain international attention. Murilo was a guest from Brazil (ok, I'll admit he was a houseguest of member Win Pendleton)!!

The cleaning crew's efforts paid off again as we collected 17 bags of trash. There were 7 bags on the east side and 10 on the west side. Extra effort was required because the wet winter was responsible for quite a bit of overgrowth. At one point, we had to issue a search for Rich Peters who was in weeds over his head after a potential treasure!! (Ok I'm exaggerating a bit).



Speaking of which, the treasures reported were a fishing lure, pocketknife, toy jet plane, and a vintage Gore-Lieberman sign!! A clear winner of trash-treasures couldn't be reached!! (I'm taking auction bids for these items if you are interested!! Haha)

After the cleanup, many of us met at the Village Inn in Apache Junction for a great lunch. Randy Peterson is the manager there and watched over us carefully. During lunch, we talked about telescopes and a variety of other interesting topics. This is always my favorite part of the cleanup effort.

Thanks again to everyone who continues to help make this project a great success. As I drive to the FJ star party site each month, I am reminded of the great a job we do at keeping our little mile of highway clean! It's something I'm very proud of as an EVAC member and club president!

Our next cleanup will be in late October. I hope to see all of you as well as a few new faces.

Better Late Than Never

By Paul Murray

When I was a young lad of about 32, I thought it would be nice to get involved in astronomy. About all I knew at the time was that you needed some kind of telescope to look at the moon. So, like so many before me, I went to our local department store and bought a telescope. I did not know a refractor from a reflector. (This was in 1965.) It turned out I bought a refractor.

With it, my children and I could see some of the features of the moon. That was about as far as I went with my involvement in astronomy at that time.

When we moved to Arizona, I thought to myself, I should look into astronomy, which was about fourteen years ago. And now, at last, I have taken the plunge. Well, better late than never. At long last, I was about to discover the beauty and wonder of the night sky and all it has to offer. But where to start? The Internet seemed like a good place to start. So, using one of the many search engines, I typed in "Astronomy" and the adventure began. I went from one web sit to another reading articles for beginners. The basic consensus was to learn the night sky and to use a good pair of binoculars. So, after researching what makes up an acceptable pair of binoculars. I decided on the Orion 10X50 wide-angle UltraView. They fit into my budget and I am well pleased with the images they give.

What are we looking at? Two books that I found reviews on and recommend are "Touring the Universe through Binoculars" and "The Backyard Astronomer's Guide". Both are excellent! In January, ORION was high in the night sky and easy to find. My wife and I also looked at M42, the Orion Nebula. But, from our residence, we could only see what looked like a very dim cloud. We learned of EVAC and attended several meetings. We learned about star parties and looked forward to attending one. It was March before we went to a star party in Florence Junction. It was well worth the wait. Everyone was very helpful and answered our many questions. As night settled in, we were intoxicated with the beauty of the night sky and came to realize how much light pollution we had at our residence. We had many opportunities to view different objects in the night sky through different telescopes. But what really got my attention was the Orion Nebula. As a beginner seeing the Trapezium quadruple star and the glowing cloud for the first time was truly a thing of beauty and a wonder of our night sky. Then being able to look at this same wonder using my binoculars, and comparing that with what we could see at our residence, my wife and I came to understand what light pollution does to our night sky.

We are looking forward to the time when we have our own telescope, and can share the beauty and wonder of the night sky with another first timer.

MY SCOPE

By: Silvio Jaconelli

Urban/suburban astronomers have the Moon, Sun, planets, double stars and brighter star clusters as targets suitable for viewing from their backyards. All too often, they overlook the fact that long focal

ratio Newtonians are ideal for this kind of work. My own personal definition of 'long focal length' is $f/8$ and higher, although there will be those who may disagree with this. Such telescopes can be mounted either on an equatorial mount or on a Dob mount.

Some time ago, I acquired a 6" $f/9.5$ Dob and, for backyard work, the views were very good. The mirror was made by Mike Spooner, in my opinion the best mirror maker around. The telescope had the following advantages:

1. It was very portable. Set-up/tear down time was measured in seconds, and the weight of the whole thing was around 25 pounds. It was very easy to pick up the entire assembly and move it several feet.
2. The secondary mirror obstruction was around 15%. Any obstruction below 20% makes any image degradation barely discernible.
3. The $f/9.5$ focal ratio made collimation very easy. Once the focal ratio gets below $f/6$, then collimation becomes increasingly important.
4. The cool down period was very quick - 15 minutes or so.
5. The 'Dawes Limit' of .7 arc seconds for a 6" aperture meant that on most nights of average seeing, the scope was performing to whatever the atmosphere would allow.

On one evening, the telescope went head-to-head with Bill Dillinges' 5" AP Starfire. Needless to say, the Starfire won the shoot out, but the 6" Dob put up a very respectable fight !!! The Starfire's two biggest advantages were the equatorial mounting, and it's ability to hold rock steady images when the seeing deteriorated. That is one of the disadvantages of a Newtonian compared to a refractor - refractors hold up to the seeing much better.

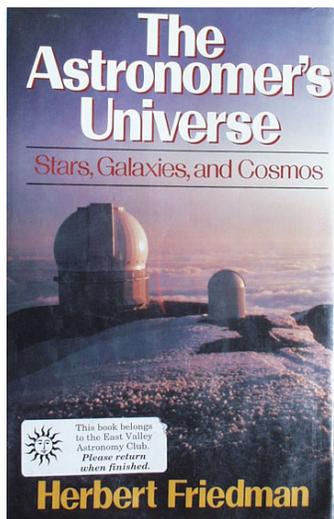
Some time later, I had the misfortune to look through one of Mike Spooner's 8" $f/8$ Dobs. I was looking at Saturn, and I was just knocked off my feet by the image. On an impulse, I got hold of Mike and persuaded him to allow me to 'trade up' to the 8" in place of the 6" ! Now, an 8" has approximately double the light grasp of the 6", and that produced both more detail and brighter images. On the downside, the 8" is heavier and less portable, and the larger aperture is affected more by poor seeing.

I still miss the 6" - what a neat little scope, and what great images. But Saturn through the 8" is just something else! I would not hesitate to recommend a 6" high focal ratio Dob as a second scope for backyard use.

Library Focus

By Joe Orman

This month's review: *The Astronomer's Universe: Stars, Galaxies, and Cosmos* by Herbert Friedman.



The astronomer's universe is almost unbelievably immense. "One hundred billion stars in the galaxy have evolved through processes of star birth similar to that of the Sun. Far beyond the Milky Way there are perhaps another 100 billion galaxies, each containing a similar quota of stars."

The astronomer's universe is incredibly complex. Forever fleeing their own beginning at the Big Bang, each galaxy recedes from the rest into nothingness. In each of these "island universes," this intricate star evolution is repeated countless times in endless variations. A star's mass determines which of many bizarre destinies awaits it: red giant, white dwarf, supernova, or, strangest of all, a black hole -- a star so massive that it has effectively removed itself from the universe. All around us, radio astronomy reveals a violent x-ray and gamma ray sky, ablaze with oddities such as antimatter and quasars. Further out on the frontiers of our knowledge -- more in the realm of speculation -- are gravity waves and perhaps other intelligent life forms.

The astronomer's universe is a constantly changing one. "The science of astronomy was celestial mechanics; astrophysics did not emerge until the end of the nineteenth century." In the twentieth century, astrophysics itself has been radically transformed, and has been supplemented by dramatic advances in scientific instrumentation and exploration. And the astronomer's universe has continued to change in the 11 years since this book was published, with new theories and instruments coming ever faster. Written just before the Hubble Space Telescope was launched, this statement is a heartbreaking reminder that its tragedies (and subsequent triumphs) were still in the future: "...the 2.4-meter primary mirror of the HST is the finest ever produced."

In spite of all this, the astronomer's universe is reassuring in its comprehensibility. The clockwork of the heavens is open for our inspection. And, as this book quotes the novelist Aldous Huxley, "...the more we know the more fantastic the world becomes and the profounder the surrounding darkness."

The Astronomer's Universe is Herbert Friedman's comprehensive and clearly conveyed summary of modern cosmology. Prior to his death last year, Friedman's long and distinguished career made him one of our nation's most-honored scientists. In an especially interesting chapter of this book, Friedman relates his personal role in putting the first scientific instruments into space, aboard V-2 rockets captured from the Germans after World War II. This was when astronomy entered the space age, and Friedman was there. As with any book, a few mistakes creep in. There is a reference to that old misconception, "Galileo's invention of the telescope," and in the glossary we learn that a light-year is equal to 186,000 miles -- that's actually a light second. But overwhelmingly, this is an authoritative and important overview; the universe in one book, if you will. The astronomer's universe would be an emptier one if Dr. Friedman had not been here to study and explain it.

This and many other books may be checked out free of charge to EVAC members. Browse the library at the next meeting, or contact club properties manager Rick Scott at rmscott@home.com or (480) 821-5721.

The Backyard Astronomer

Top Ten List

By: Bill Dellings

Top ten lists seem to be popular these days. I thought it might be fun to list my ten most memorable astronomical experiences in 45 years of stargazing. Hmmm, let's see... in no special order.

1. Seeing Saturn in the Lick observatory's 36" refractor. Without Dad's knowledge, I wrote for tickets to their Friday night public viewing session.. "Hey Dad, look what I got!". After a miserable, winding 19-mile drive up Mt. Hamilton, and standing in a long line, my turn came. Wow! The ringed planet looked as big as a basketball!
2. Bolide! 1966, Boston. Having toured Boston that day, I was returning to a friend's house on a bus filled with commuters reading newspapers. It was sunset and, looking south out a window, I noticed a fireball moving west along the southern horizon, perhaps 15 degrees high. It was in flames, AND pieces were dropping off which also were on fire! It seemed as though the whole scene was happening in slow motion. The meteor must have been moving at a slow rate of speed. At first I feared it was a plane going down. I wanted to shout, "Look at that!", but I thought, no, they'll think I'm crazy. I kept silent and believe I was probably the only one on the bus who saw it. It

made Life magazine a month or two later (April, 1966?).

3. 1986 Halley Comet tour to Australia. OK, the comet wasn't all that great even down there. But! I was on a tour bus for 2 weeks with wild man Patrick Moore, the noted English astronomy popularizer. What a dynamo. Also, I was able to view the southern skies from central Australia, where it was very dark, giving me a chance to learn their spring constellations and observe deep sky stuff with my C5.
4. The 1991 Total Solar Eclipse in Baja, Mexico. What can I say, absolutely awesome, 6 ½ minutes of totality! My first successful total eclipse. True: no photo or description can substitute for the experience of seeing one in person. Stunning. The gossamer structure of the corona is incredible. Among many luminaries on the Sky and Telescope tour, I met Roland Christen of Astro-Physics, saw his 5" f8 refractor, and bought one a year later.
5. Mauna Kea Observatory, 1990. After 3 tries at getting there, I finally made it. A sunset photo tour with a guy running a small business. Didn't actually get in to the facilities, but I was at the summit, at 13,800'. It was February and cold. I took my gloves off for a few minutes to operate my camera and got frostbite on two fingers for my trouble. Later, at the 9,000' level, we stargazed with the guy's C8 for an hour. I wondered how there could be so much light pollution to the west, Kona's not that big. My god, I was seeing a very prominent Zodiacal Light! My first sighting of this long spear-like shaft of light rising from the west, broad at its base and tapering off high in the sky. (it was spring, thus the ecliptic was high at dusk). Later, we saw a "moonbow". (yes, it was a full moon that night-poor planning).
6. Comet Shoemaker-Levy crashes into Jupiter, July 1994. Perhaps we don't appreciate this event as much as we should. How often do you see a cosmic collision, excluding nightly meteors? Not often. This really can be classified as a once in a lifetime event. Too bad the Monsoons of summer (here in phoenix) only allowed me about a half hour, one night, to view the impacts with my 5" refractor. Even BEFORE I focused the instrument, I could see large out of focus black marks on Jupiter's surface. And I was one who predicted you'd see nothing, surely the gas giant would simply swallow the comet fragments (!). WRONG!
7. Getting my first telescope, 1956. My dad and I were able to come up with \$45 to buy a Criterion 4" Dynascope. It seemed like FOREVER waiting for its delivery. Oh, the smell of its Bakelight tube, I can still smell it today in my memory. I
8. Finding Pluto, June 19, 1996. Using Sky and Telescope's finder chart, I finally tracked down this elusive little guy with my C14 at my observatory in Apache Junction (AZ). Fainter than I imagined, it was one of FAINTEST "stars" in the field of my 14" scope. From time to time, it would disappear, it was so faint.
9. Comet Hale-Bopp, March 1997. Wow, what a comet, what a show. I called it the "breakfast comet" because I could see it through an east window from inside my house with the lights on as I had coffee before going to work at 4:30 a.m. as it rose over the Superstition Mountains.
10. Assisting Dr. William Kaufmann at astronomy seminars at North Shore Tahoe in the early 80's. I have fond memories of those days and the many people who took those classes. At a private observatory on Mt. Rose at 8000', 20 people gathered to take a tour of the night sky with Dr. Kaufmann and a Celestron 22" telescope (one of five made, I understand). After taking the class as a participant, I was invited back to assist by providing my C14 outside the dome (which could only accommodate 10 persons comfortably) to the team waiting their turn at the big scope which was in a dome 50 feet above the ground! Usually half of us stayed in a 2-bedroom condo owned by one of the class members who attended every seminar (by special arrangement with Kaufmann). It was cozy, but we had a lot of fun. We made long time friends with repeat students. Sadly, Dr. Kaufmann passed away in 1994 at age 52. Though a Ph.D and noted author/lecturer on black holes, he enjoyed working with amateurs and had that special quality that made them feel comfortable in his presence.

Well, there's my top ten. I would enjoy reading other member's top ten experiences in a future EVAC article, how about it?

Updates on Various Solar System Missions

By: Laurice Dee, Ph.D., Ambassador
NASA-JPL Solar System Ambassadors Program

Here are the updates of some of the current solar system missions. Enjoy!

ULYSSES <http://ulysses.jpl.nasa.gov/>

- Flew over the high Southern latitudes from September 2000 to January of this year.
- Will head up to the Northern latitudes later this year. The trip has been made around the Sun for the second time. This time around is during the active (maximum) portion of the solar cycle.

SOHO <http://sohowww.nascom.nasa.gov/>

- Recovered from communications black-out that occurred in June 1998 and is now back to normal operations, taking exciting images of the Sun. The latest finding, according to scientists, is that the solar wind streams out of the Sun by “surfing” waves in the Sun’s atmosphere.
- Continues to take images of wayward comets hitting the Sun and the solar flares.

MARS GLOBAL SURVEYOR

<http://mars.jpl.nasa.gov/mgs/>

- Completed its mapping mission this past January after bringing back most interesting images of Mars. Data on Mars’ atmosphere and surface composition were also collected.
- Continues to take images of interesting spots on Mars and will be used as a communications relay for future spacecraft.

MARS ODYSSEY <http://mars.jpl.nasa.gov/odyssey/>

- Just launched on 7 April 2001 and is now on its way to Mars. The arrival date will be on 24 October 2001.
- Pointed its THEMIS instrument to both Earth and Moon to take images for calibration purposes. The good news is that the images turned out very well.

STARDUST <http://stardust.jpl.nasa.gov/>

- Flew past Earth this past January to receive gravitational boost for the second orbit around the Sun.
- Ran into a problem with the lens of the NAVCAM fogging up again. Will apply heat over a period of time to try to clear up the lens. The heat application worked well the first time. The NAVCAM is used to pilot STARDUST to Comet Wild 2 and guide it through the comet during sample collection.
- Has been using the CIDA (Cometary and Interstellar Dust Analyzer) to collect and analyze

interstellar dust during the interstellar dust collection periods.

DEEP SPACE ONE <http://nmp.jpl.nasa.gov/ds1/>

- Successfully validated all 12 instruments, took advantage of its artificial intelligence, and will fly by Comet Borrelly this coming fall.
- Has been using its navigation camera as a “star scanner”, since its star scanner malfunctioned and could not be recovered via commands and updated software programs.

GALILEO <http://www.jpl.nasa.gov/galileo/>

- Received another extension to its most illustrious mission this year. The extension will include five flybys of the Galilean satellites.
- Has brought back a wealth of data on Jupiter’s atmosphere and magnetosphere and the physical and chemical properties of the surface of the Galilean satellites.
- Has been in excellent health, despite of enduring high dosages of radiation that are emitted from Jupiter. Has been performing concurrent studies of the Jovian system with Cassini during the last 6 months.

CASSINI <http://www.jpl.nasa.gov/cassini/>

- Plans to bring back a wealth of data on Saturn’s atmosphere and magnetosphere and the physical and chemical properties of the surface of the moons.
- Made successful close approaches to Venus, Earth, and Jupiter to receive gravitational boost en route to Saturn.
- Has been performing concurrent studies of the Jovian system with Galileo during the last 6 months.

PIONEER 10

http://spaceprojects.arc.nasa.gov/Space_Projects/pioneer/PNhome.html

- Made direct observations and obtained close-up images of Jupiter after traveling through the Asteroid Belt.
- Mission ended on 31 March 1997.
- Is now over 6.8 billion miles away and is heading towards the constellation of Taurus (The Bull). Is still alive and kicking!

VOYAGER 1

<http://vraptor.jpl.nasa.gov/voyager/voyager.html>

- Launched on 5 September 1977 to explore the solar system just like the Pioneers.
- Encountered Jupiter on 5 March 1979 and Saturn on 12 November 1980.
- Cruised beyond Pioneer 10 on 17 February 1998 and became the most distant human-created object in space at 6.5 billion miles! Is still alive and kicking!

- Is now at the VERY edge of the solar system!

VOYAGER 2

<http://vraptor.jpl.nasa.gov/voyager/voyager.html>

- Launched on 22 August 1977 to explore the solar system, just like its twin, Voyager1.
- Encountered planets in the outer solar system.
- Was returned to normal flight operations on 14 November 1998 after a 66-hour communications black-out. Is still alive and kicking!
- Is now on the outer fringes of the solar system.

Here are the websites for some of the Earth and past solar system missions.

SeaWinds onQuickSCAT:

<http://winds.jpl.nasa.gov/index.html>

GOES:

<http://www.flatoday.com/space/explore/uselv/atlas/ac137/index.htm>

Lunar Prospector: <http://lunar.arc.nasa.gov/>

Mars Pathfinder & Sojourner:

<http://mars.jpl.nasa.gov/default.html>

Mars Climate Orbiter:

<http://mars.jpl.nasa.gov/msp98/>

Mars Polar Lander: <http://mars.jpl.nasa.gov/msp98/>

NEAR: <http://near.jhuapl.edu/>

Pluto-Kuiper Express:

http://www.jpl.nasa.gov/ice_fire/pkexprss.htm

Jet Propulsion Laboratory:

<http://www.jpl.nasa.gov>

Applied Physics Laboratory: <http://sd-www.jhuapl.edu/>

Note: Both JPL and APL are involved with the operations of many of the solar system missions. Information and updates compiled by Laurice Dee, Ph.D. Laurice.Dee@ARZ.Boeing.com

President's Comments

By Martin Bonadio

April was a really busy month. The best part is that the skies cleared up nicely, and the evening temperatures were very comfortable. That was until Sat. the 21st. Apparently a few things caused this. First, the Astronomy Shoppe in Phoenix announced they were shutting down, and everyone rushed to buy eyepieces. Next, Rick Scott jumped on this opportunity and bought 2 sets of nice Plossl eyepieces for the EVAC library. On that same night the Sentinal-Schwaar and FJ star parties were scheduled. Guess what – it rained and a big dust storm rolled through!! A lesson to all of us about buying eyepieces on star party nights!! (I should have added that to my list of telescope buying tips).

We started the month with a great presentation by Steve Dodder. His discussion about variable stars

and gamma-ray busts was very interesting. After the meeting, I pulled out my Levy book on variable star observing and picked a few brighter ones to try and observe in upcoming months. We'll see how successful I am in later writings.

Next, the club participated in the AZ Science Center's 4th anniversary and Astronomy Day celebration. This was a lot of fun. We were able to expose our hobby to over 1800 people that day! SAC, GPIDA, and PAS were present. Many stopped by our booths to look at our telescopes, ask questions, and take literature. We had telescopes set up outside for solar observing all afternoon. Furthermore, there were astronomy talks in the gallery all afternoon – including 2 showings of the EVAC slide show! There were fantastic posters and displays from NASA and Hubble events, and finally, we had a TV with computer connection displaying real-time positions of the Hubble and ISS. I want to thank those who participated, and want to say that this was a big deal for our club. Those volunteers from EVAC were:

Martin Bonadio	David Coshow
Rick Scott	Joe Orman
Jason Nelson	Craig Dokken
Gene Lucas	Laurice Dee
Ken Levy	Paul & Carmen Murray
Randy Peterson	Win Pendleton

Christine Shupla, Planetarium Manager, thanks all of you as well, and invites EVAC back in the coming months to do a family meeting and to help again with our telescope and astronomy displays!

Next was the club sponsored a star party for the Scottsdale Community College. This is also important because Steve Mutz of SCC allows us to use the campus each month to hold our meetings. It is wonderful that we can setup telescopes each semester and give his students an opportunity to look through our scopes and answer questions. Thanks go out to the volunteers participating in this event. For me it makes up for bad weather on the 21st – spoiling my star party fun in dark skies!! Ha ha

As you can see my message this month is **participation**. One of my favorite personal activities is participating in astronomy activities. Star parties, observing, meetings/lectures, and club events all play a major role in my ability to enjoy and learn more each month. I'm am very pleased to devote my entire article this month to thanking those of you who help organize and participate in club activities. I hope I have the opportunity to continue with this trend going forward this year. While I certainly have my own goals for observing through my telescopes, I also have one big goal for this club – and that is to make sure that each and every one of our members gets the value they expect from it. It's a wonderful feeling to

watch so many of you getting a chance to take part in astronomy related activities with EVAC. With that said, if you have some ideas or an interest in helping, please don't hesitate to contact me at 480-926-4900 or email: mabastro@aol.com

Clear Skies... and I hope to see you at the next meeting. I have a feeling that our guest speaker is going to WOW all of us (hint hint)!

Vice-President's Comments

By: David Coshow

Our speaker for the month of May will be Cris Schur. Cris will discuss at length what he has learned while using his CCD camera. He will address the methods and equipment used and answer questions as to how to do it. He will hopefully talk about his new camera.

We will meet for grub and gab at the Black-eyed Pea at Pima and Indian Bend at 5:30 pm May 9 (Wednesday). Please call me if you would like to attend and have not been in the past. The number is 480-730-1132.

EVAC Meeting Minutes

by Tom Mozdzen

7:30pm - Martin Bonadito called the meeting to order. There were ~50 people in attendance with several guests present. Most of the guests heard about the club from the web-site.

Upcoming star parties and events were discussed:

- Several April Star Parties.
- Dinner with the speaker @ 5:30pm at Blackeyed Pea – Scottsdale Pavilions shopping center (Pima & Indian Bend).
- Adopt-a-highway took place in April and was very successful and a lot of fun as always.
- AJ passed out certificates and plaques for capturing Messier Marathon object of 50 and over.
- Various other miscellaneous announcements were made which are time critical and will be over by the time you read this.

Show and Tell:

- Chris Schur – gave us a very nice slide show of the recent spectacular aurora activity in Arizona.
- Joe Orman – shared with us an interesting “grab bag” variety of photos.
- Rick Scott – showed us slides from his recent trip to the Mt. Palomar Observatory and a few slides from this past Messier Marathon. One photo might be a world record – the largest number of

Lurie-Houghton telescopes seen in one field of view!

- Laurice Dee – Gave us a nice informative update about recent satellite activities.
- Tom Polakis – showed photos of the auroras just north of Paradise Valley, which he was able to capture due to a courtesy call by Chris and a very boring Mars movie he was watching at the time.

8:30 Main Speaker - Our main speaker was Steve Dodder. He is the director of the Stone Haven Observatory. His speech came in two parts. First, he spoke on the subject of variable stars, describing star evolution and how stars become variable at different stages of their life. He then spoke on high energy gamma ray bursts and what might be causing them.

9:30 pm Meeting Adjourned.

If it's clear...

By Fulton Wright, Jr.
Prescott Astronomy Club

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

Mars is at opposition next month, which means it is close enough now to be worth a look. It rises at 10:50 PM on May 1 and 8:50 PM on May 31.

On Saturday, May 5, about 7:45 PM you can see an interesting arrangement of stars and planets. With your unaided eye look low in the west-northwest for Saturn (mag 1) and Mercury (mag -2). Up and to the left is Aldebaran (mag 1). Higher and to the right of the star is Jupiter (mag -2).

On Thursday, May 10, about 7:50 PM you can see 3 planets and a star in a diamond pattern. With your unaided eye, look low in the west-northwest for the 4 May 5th objects with Mercury in a new position.

On Monday, May 14, about 8:00 PM you can see 2 planets side by side. With your unaided eye or binoculars, look low in the west-northwest for Jupiter and Mercury about 3 degrees apart.

On Saturday, May 19, about 4:30 AM, you can see the Moon and Venus together. With your unaided eye, look low in the east for the two of them about 5 degrees apart. If you have a telescope, you can see that the Moon looks 60 times bigger and is a thinner crescent. Venus shines in the morning sky all month.

On Thursday, May 24, about 8:00 PM, you can see Mercury at its best. With a small (3 inch)

telescope, look low in the west-northwest. The lower bright object is Jupiter; the upper one is Mercury with a crescent phase. The thin crescent moon is off to the left. Mercury can be viewed well for several days around this date.

On Tuesday, May 29, after 9:00 PM, you can see an asteroid near a star. Asteroid 6 Hebe (mag 11) will be about 5 arcminutes from star 6 Comae Berenices (mag 5) both tonight and tomorrow night. The fairly bright star makes it easy to locate the asteroid and follow its motion over a few nights. Theoretically you can see a mag 11 object with a 2 inch telescope, but you will have an easier time with a 3 inch or larger.

For Sale

Orion XT10 10in f/5 Dobsonian in excellent condition. Complete with 9mm & 25mm Plossl eyepieces, 8X50 finder, boxes & manuals. This diffraction limited scope cost \$720 delivered. Sell for \$600. Call Eron at: 480-373-9973 or 602-740-3489

Deadline for June Newsletter
Submissions is May 23rd, 2001.
 Send articles to JKLINE29@HOME.COM

EVAC & Other Events: 2001					
	New Moon	Meet	Local	Deep Sky	Other
May	5/23	5/9	5/19	5/26	5/12 – Boyce Thompson Star Party ----- 5/25 to 5/28 – Riversice Telescope Makers Conference
June	6/21	6/13	6/16	6/23	6/16 to 6/23 Grand Canyon Star Party
July	7/20	7/11	7/14	7/21	
Aug	8/19	8/8	8/11	8/18	
Sept	9/17	9/12	9/15	9/22	
Oct	10/16	10/10	10/13	10/20	
Nov	11/15	11/14	11/10	11/17	
Dec	12/14	12/12	12/8	12/15	



East Valley Astronomy Club

EVAC on the Internet:

EVAC Homepage: 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

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

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

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.

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: _____

Phone #: _____ E-mail: _____

URL: _____

4. Newsletter delivery option: () U.S. Mail () E-mail

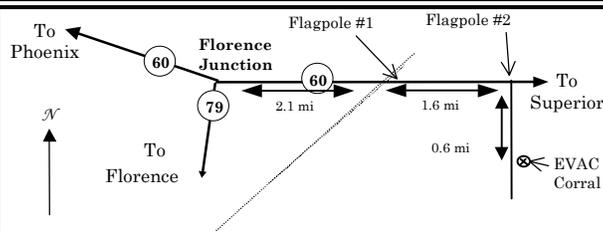
EVAC Star Parties

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.

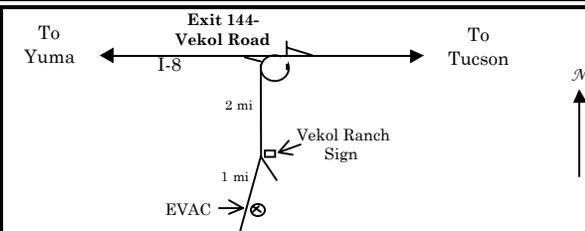


Deep Sky Star Party: Vekol Road Site

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 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
David Coshow
(480) 732-1132

TREASURER
Randy Peterson
(480) 947-4557

SECRETARY
Tom Mozdzen
(480) 497-5703

PROPERTIES
Rick Scott
(480) 821-5721

NEWSLETTER
Jim & Chris Kline

East Valley Astronomy Club—2001
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. 85214-2202. (480) 947-4557 Email: rgp14159@aol.com

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

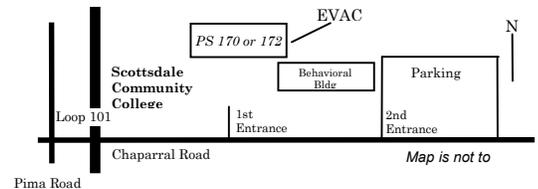
Address Changes: Contact Randy Peterson. PO Box 2202, Mesa, AZ. 85214-2202. (480) 947-4557. Email: rgp14159@aol.com.

Newsletter: Contact Jim & Chris Kline. 1209 W. Palo Verde Dr., Chandler, AZ 85224. Email: jkline29@home.com Contributions may be edited. 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 notify Jim & Chris of your delivery 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 Randy Peterson, rgp14159@aol.com

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

Jim & Chris Kline, Editors
1209 W. Palo Verde Dr. Chandler, AZ 85224

Contents:

- Adopt-a-Highway Report
- Better Late Than Never
- My Scope
- Library Focus
- The Backyard Astronomer Top Ten List
- Updates on Various Solar System Missions
- President's Comments
- Vice-President's Comments
- EVAC Meeting Minutes
- If it's Clear...
- For Sale

Reminder: Next EVAC Meeting
Wednesday, May 9, 2001