

# East Valley Astronomy Club

October

Newsletter

1997

## EVAC MEETING HIGHLIGHTS

by Aaron McNeely, Secretary

President Sheri Cahn started the meeting at 7:40 pm. Including the main speaker, there were 48 persons present, 43 of these members and 4 newcomers. Sheri discussed the following events:

Local Star Party: September 27 at Florence Junction.

All-Arizona Star Party: October 4 at Arizona City.

EVAC Meeting: October 8 at SCC.

### Old Business

All Arizona Star Party - The All-Arizona Star Party will be held on the nights of October 3-4 with a porta-john present for the second evening (Saturday). Maps and directions were available at the September meeting. The star party is held on private land and approximately 80-100 people are expected.

Adopt-A-Highway - Scheduled for Saturday, October 18, EVAC maintains a stretch of highway on Route 60 close to the Florence Junction site for which we receive the publicity of a sign. Volunteers will be needed to help pick up trash.

New EVAC Properties Manager - Frank Honer was elected as properties manager at the August meeting due to Ken Spruell's transfer in employment to Seattle.

Florence Junction Site Permission - This situation has been resolved, EVAC has authorization to use the site. Copies of the permit are and will be available at EVAC meetings in case anyone is ever questioned about using the land.

Name Tags - EVAC Treasurer Silvio Jaconelli will order individual name tags for \$7. The new name tags possess a metallic sheen with the smaller EVAC logo.

### New Business

New EVAC Officers - Nominations for new officers will be held at the October meeting and the election itself will be held in November. The following positions will

be open: President, Vice President, Treasurer, Secretary, and Board of Directors (5).

EVAC Web Page - The server hosting the EVAC Web Site was struck by lightning and consequently the web site is no longer accessible. Robert Kerwin has agreed to take over as "webmaster" and get our homepage back in cyberspace.

"Hunting the Herschel 400" - Paul Dickson of the Saguaro Astronomy Club has written another magnum opus, a guide book to the celestial objects of the Herschel 400. The book will be available for \$25 at the next EVAC meeting and for \$30 everywhere else.

Hermosa Vista School Star Party - Don Wrigley is organizing a star party for the Hermosa Vista School and approximately 700 people are expected to attend! Volunteers with telescopes are needed for this event.

Buckeye Hills Land Scheme Off - Gene Lucas reported that the Buckeye Hills land sale is off. This sale of state controlled land was a threat to the Saguaro Astronomy Club's main observing site.

### Member Show & Tell

Pierre Schwaar's Lightning Video - Pierre treated everyone to video of Perseid meteors and a large display of sunspots taken that very afternoon. Pierre corrected his previous statements concerning his famous lightning

### UPCOMING CLUB EVENTS

- All-AZ Star Party, Oct. 3-4, Sunset -6:09 pm  
Arizona City site
- EVAC Club Meeting, October 8, 7:30 pm  
SCC, Physical Science Bldg., Room 172
- Local Star Party, October 25, Sunset -5:42 pm  
Florence Junction site
- Deep Sky Star Party, Nov. 1, Sunset -5:35 pm  
Vekol Road site
- EVAC Club Meeting, Nov. 12, 7:30 pm  
SCC, Physical Science Bldg., Room 172

video. The phenomenon captured on video is called a "positive ground streamer" not a "stepped leader."

Stellafane '97 - Sam Herchak and Anne Beeby went to the Stellafane astronomy convention in Vermont. Sam showed slides of the setting and the many telescopes. Stellafane boasts a high turnout, including many families, for what is essentially a Saturday event. The organizers gave out tremendous door prizes such as a complete set of Nagler eyepieces and there were many things to see and do. There was a "pick out the worst mirror" contest requiring looks through three identical Dobsonian telescopes of differing optical quality. Sam even saw on display in a local "museum" devoted to Stellafane lore a small model of the pink clubhouse constructed by past EVAC member Russ Chmela.

### **Featured Presentation**

Tim Hunter is a radiologist and co-founder of the International Dark-Sky Association, he came to discuss the issue of light pollution and the IDA's efforts to combat this threat to astronomy.

**Theft of the Night:** The title of Tim's talk pretty much sums up the situation faced by most amateur astronomers. There are two major forms of light pollution: "Light trespass" and general urban sky glow. Light trespass involves the offending glare of an improper light fixture from a neighbors yard or local business. General urban sky glow is explanatory, this is the reason that a majority of today's urban population has never seen a dark sky in full glory and that amateur astronomers are forced to drive long distances from cities to pursue their vocation. Urban sky glow also affects astronomical observatories. For example, Kitt Peak Observatory operates at only 88% of its possible efficiency of observation. Many other facilities fare much worse. For example, Lick Observatory near San Francisco operates at 23% efficiency.

An effective approach to combating light pollution is in the implementation of better light fixtures. Examples of bad fixtures are globes or mercury vapor "pole lights." These fixtures direct light in all different directions contributing to the 30% of all outdoor light that is directed up towards the sky. A "good" light fixture is shielded and the light is directed only at the ground. These types of fixtures are also termed a "full cutoff" or "shoebox" fixture. It is heartening to observe that most new facilities are utilizing shoebox fixtures.

Good fixtures make good economic and environmental sense. Modern fixtures use less electricity due to their bulbs and the reflecting surfaces inside that direct more light downward. It is sobering to consider that the power used in one mercury vapor fixture during one year equals 200 pounds of coal and that 55% of the power

generated in the United States comes from burning coal. The burning of coal for electricity creates air pollution, acid rain, and releases carbon dioxide, a "greenhouse" gas. As you can see, the use of proper light fixtures can have a direct impact not only on astronomy but on the quality of our environment. The use of more electricity also creates a greater financial burden for the consumers of that electricity.

Why do we need outdoor lighting? For safety, security, advertising, recreation, and ambiance. Astronomers are not against outdoor lighting in general, we need it as much as anyone else, but are against the type of inefficient lighting that has been practiced for many years and that negatively affects our environment and quality of life. The IDA adheres by the following aphorism: One should see the effect and not the source. Quality light fixtures improve the visibility of locations when compared to the use of poorly designed, glare-ridden fixtures and create a more aesthetically pleasing setting. Dr. Hunter emphasized that many IDA members are non-astronomers who remember and miss the starry skies of an earlier time.

Dr. Hunter also discussed a set of goals that light pollution activists could adhere to. The first of these are immediate, work to remove an offending fixture and preserve a dark site. An intermediate goal would be to encourage the development of proper lighting codes. The long term goal is to restore a dark sky to urban areas. The IDA is available as a resource for individuals in their efforts to combat light pollution. The organization provides Information Sheets and helps to disseminate the views of astronomers and lighting activists worldwide. All amateur astronomers should support this organization that promotes a better environment for individuals and astronomers everywhere.

The following information is for those who are interested in joining the IDA:

International Dark-Sky Association  
3545 North Stewart  
Tucson, AZ 85716

520/293-3195  
520/293-3192 (fax)

SaveOurSky@aol.com  
<http://www.darksky.org>

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### **October's Guest Speaker**

This month's speaker will be club member Pierre Schwaar, who will present a history of telescopes he has made over the years.

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## **ADOPT-A-HIGHWAY CLEANUP**

by Sam Herchak/Coordinator

As part of our ongoing commitment to keep Arizona roadsides beautiful, EVAC is conducting a cleanup of Highway 60 Mile 211-212 on Saturday, October 18th at 8:00 AM. Our task is to pick up trash from the shoulder of the highway to the right-of-way fence. The median separating this divided highway is OFF LIMITS! State crews are responsible for that. Here is what else you need to know:

Participants must be at least 12 years old. Work in groups facing oncoming traffic.

Dress appropriately—long pants, sturdy shoes/boots, long sleeves and/or sunblock, hat, and heavy GLOVES. I will also have safety vests to be worn. Please have lots of water and a first aid kit on hand.

Pick up bags and other litter with caution—it could contain dirty needles, be hiding a snake, etc. A stick with a nail or hook is strongly recommended to use instead of your hands. A large bucket cuts down trips to the trash bags too. Few large objects are found out there, but if lifting one, keep your back as straight as possible, the object close to your body, and let your legs and arms do the work.

Be prepared for anything—people have found guns, pipe bombs, toxic waste, etc. along our roadsides. If anything looks odd or is really heavy, LEAVE IT ALONE! Note its location and we'll notify the State about it afterwards. When a trash bag becomes full, place it on the very edge of the pavement, not in the pullout lane.

As with any government program, there are a few requirements to complete before participation. One is a briefing from the cleanup coordinator. The second is to sign the usual waiver for the State saying participants won't sue if something happens. The forms are kept on file so one signature covers you for all future cleanups.

Look for the sign up sheet and waivers at the October Club meeting. With 8 volunteers, we can finish by 11 AM. Meet at Florence Junction (intersection of Highway 60 and 89) on the north side where a few shops are found. Park in the far west corner of the parking lot closest to the radio tower. With 150 members, it would really be nice to see a new group of people this time. Contact Sam at 924-5981 if you can help or have questions. Thank you.

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## **SATURN OCCULTATION**

by Frank Honer

I wasn't particularly pleased when I found I would be required to supply second shift engineering support to

the September refueling outage at Palo Verde. The thought of working from 7:00 PM until 5:30 am six night a week for an entire month certainly did not appeal to me. After I resigned myself to the assignment, I happened to check my calendar and found that the Moon would occult Saturn at approximately 3:15 am on September 18th. This, being a weeknight, would not be something I would usually be able to observe. I decided working nights wouldn't be so bad. I guess some dark clouds do have a silver lining.

For a few nights before the event I watched the moon as it took its predictable path toward the planet. On the night of the 16th, as I was walking from one to the nuclear units to the machine shop, I looked up at the beautiful zodiacal arc made by Jupiter, the Moon, and Saturn. The I held my fist up at arm's length to judge the angle between the Moon and Saturn. About 1 1/2 fists (15 degrees). Since the Moon travels across the sky at about 1/2 degree per hour the event appeared to be 30 hours away. Just about right!

Just then I heard, "Hay Frank. What are you up to?"

It was a coworker and friend, Mike. "I looking at Jupiter, the Moon, and Saturn, all in a line.", I told him.

"No kidding, I saw Jupiter and the Moon, but not Saturn.", he said.

I then proceeded to show him and tell him what would happen the next night at 3:15 am. I said that I planned on bringing my telescope to observe the event. The next thing I know, he invited himself along. This was fine with me as I always like expose people to astronomy.

The next night we took a break at about 3:00 am and set the telescope up in the parking lot. The viewing was surprising good considering we were setting up quickly on blacktop and were in an very lighted area. For security reasons, the lowest light density allowed at Palo Verde is 2 lumens per square foot (enough to read a newspaper and see color in the photographs.

We could no longer see Saturn with the naked eye as it was totally washed out by the Moon's glare. But, there it was in the telescope. I could see Mike was truly impressed. This was the first time he looked through more than a dime store telescope. He and I both observed the beginning of the occultation, but we felt we should probably get back to work before Saturn emerged from the unlit side of the moon. I told Mike that too bad Jupiter had set as we could have also looked at it.

"How about tomorrow, during our lunch break?", he asked.

# All-Arizona Star Party 1997

October 3<sup>rd</sup> and 4<sup>th</sup> 1997

The monsoon is over, the skies are clear again, it's getting cooler and...

It's time for the 1997 All-Arizona Star Party, sponsored by East Valley Astronomy Club! Once again, this year's star party will be held at a site south of Arizona City on October 3-4. This site offers the right combination of dark skies, good seeing and not-too-cold nights that will encourage you to stay up well past your bedtime!

## Fall clearing?

Have some old equipment gathering dust in your garage? Or perhaps you're in the market for some good bargains? Don't forget about the swap meet at 4:30pm on Saturday afternoon! You'll have plenty of opportunities to turn that equipment into cash, or that cash into equipment.

## How to get there

The site is somewhat remote, but still relatively easy to find. Take I-10 south from Phoenix to Exit 200, Sunland Gin Road. Turn right (south) after exiting the freeway. After about 15 miles, the pavement ends and about two miles further, the road turns sharply to the west. After another four miles, the road will turn south just after the "Silverbell Estates" signs. Three miles past the signs, the road will veer off to the west. Continue on the main road for another five miles, where it passes through a gate. Take an immediate left after the gate and continue for 0.7 mile. Take the next right onto a road that leads into an abandoned field. We will post signs along the road, so follow the EVAC signs. See the map on the back of this page.

## You probably already know this, but...

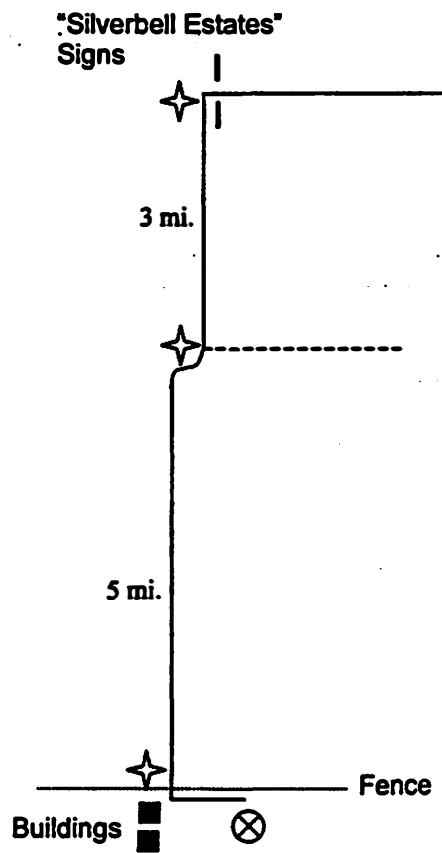
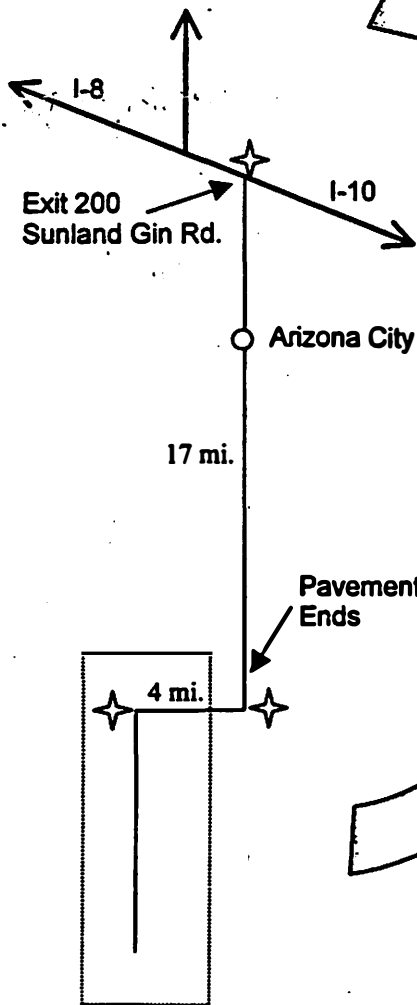
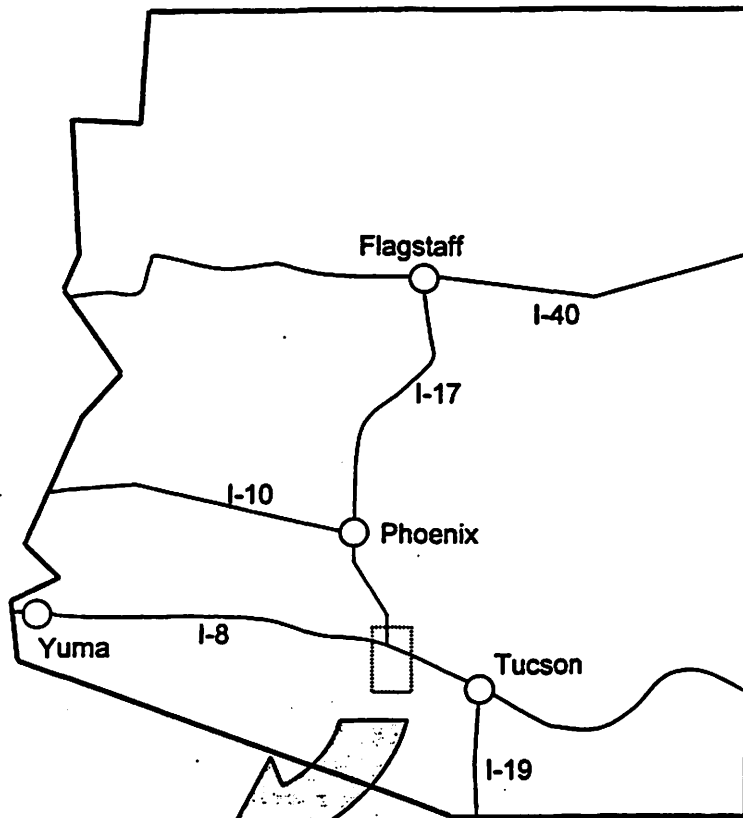
...We have to say it anyway. Common sense stuff to make this year's star party enjoyable for everyone:

1. Consumption of alcohol is not permitted at the site.
2. Please pack out all trash. Remember that the site is on private land and we are the invited guests of the landowner.
3. There is no water at the site, so bring plenty.
4. The only facilities provided will be a porta-potty on Saturday night.
5. Please plan on arriving before dark. Although we will post signs along the road, this site is rather difficult to find after dark. In addition, late arrivals can be rather disruptive to those that are already observing or taking pictures. If you must arrive late, park near the entrance on the north end of the field.
6. If you must leave early, please park toward the north end of the field. Before leaving, warn those around you of your plans. Likewise, if you are planning to stay the entire night, park to the south.

## Need more info?

If you have questions about this year's All-Arizona Star Party, please contact:

Sheri Cahn  
3721 W. Hayward Ave.  
Phoenix, AZ 85051  
Phone: (602)841-7034



## SKY & TELESCOPE, NOW AND THEN

by Tom Polakis

A lot has been said about the decline of "Sky & Telescope", mostly regarding its loss of substance and increased emphasis on design over content. I have subscribed for 20 years now, and thought I agreed. So I took a look at two issues 15 years apart to sample how it has changed, and my feelings about those changes. I was surprised to learn that I like today's S&T more.

The two issues I picked were October 1997 and November 1982. I tried to judge comparable departments and features, and notice what is new as well as what has been completely dropped since 1982. The first glaring difference - and it is glaring - is the number of full-page advertisements in the opening pages. The 1982 issue had 2 in the first 36 pages. That number is 15 this month. I know this isn't S&T's fault, but the Orion ad with the caricature aliens looking through a cheap Dob was particularly insipid, while one wondered if that detailed Whirlpool image on p.33 was taken while the porch light bounced around inside the C8's tube. Perhaps these pages aren't any worse than noted astronomer Leonard Nimoy on the 1982 back cover, looking seriously over the same telescope.

Secondly, the type is now larger, as much as 50% so. I estimated that the old magazine could fit 1500 words on a page, but only 1000 fit on a 1997 page. Although the 1997 pages have more color, the space taken up by illustrations isn't much different, which is contrary to what I'd expected.

Here are a couple features that we lost sometime between 1982 and today:

**History Lessons** - I can't say that I'm personally a fan of much of this, but Joseph Ashbrook, Owen Gingerich, and others did a nice job summarizing history of astronomy. These still appear in today's S&T, mainly covered by E.C. Krupp, but not as frequently or as in-depth.

**Some of the data in the Celestial Calendar section** - I'm not sure why the tiny space devoted to variable star maxima or minima needed to go. Ditto for the moon's distances.

**Deep Sky Wonders** - I had wished that Alan MacRobert would have picked this up, but he writes well on other subjects beside deep-sky observing, and still needs to be an editor. Now we get only sporadic deep-sky coverage.

**Comet Digest** - This column is sorely lacking. While ninety percent of all observable comets are mere fuzzballs, John Bortle's feature was among the first columns I turned to. His column single handedly got

me interested in comets.

**What did we gain since 1982?**

**Focal Point** - I know this is a favorite for many people. Here is a moderated opinion/story column written from a wide variety of perspectives. It often makes for good newsgroup fodder.

**Product Reviews** - Face it, folks. S&T isn't going to come out and say any advertiser's scope sucks. Remember, though, that there were no product reviews in the old days. Their comparison of small, commercial Dobs a couple years back was candid enough for me to come away, disliking all of the scopes.

**Astro Imaging** - This month's travelogue about Grove Creek Observatory is a poor example, and maybe belonged elsewhere, but imaging and photography deserve at least one column per month. The early '80's S&T had no regular feature about the nuts and bolts of photography.

**Gallery** - Here is an opportunity for showing off the best photos they receive. I would bet that for every photo that makes it, there are a dozen rejected. Amateur photography has become so good that it's not just M42 ad nauseum anymore.

**More subjectively, what got worse since 1982?**

**Opening ads and countless Meade ads at back.**

**News Notes content** - In 1982, there were 11 articles, 6 of which came in at 500-1000 words, and full of information. This month, there were 7 at 200-300 words, still very well written, but just not as much to them. Comments to come about News Wire and Mission Update.

**Book Reviews** - 4 or 5 reviews approaching 1000 words each have become two 600-word reviews and a page about software.

**Rambling Through The Skies** - This one is almost a toss-up. E.C. Krupp makes up for some of the lack of history coverage, but you couldn't beat the late George Lovi's wonderful explanations of celestial mechanics.

**Gleanings for ATM's** - Now replaced by Telescope Techniques, which again, isn't as thorough as it once was. Given the state of ATM'ing observed at the past few RTMC conferences, maybe this is just a sign of the times.

**Price** - People may complain that in 1982, a subscription cost \$18, and it is twice that amount today. That works out to 5% inflation for 15 years. Not so bad after all.



And what has improved since then?

Understandable graphics - It doesn't bother me that the color-magnitude diagram on p.44 or the daily temperature range of Mars on p.17 are plotted in color. In fact, I think both diagrams are clearer for it. As long as they don't start presenting bar charts that proclaim "We're Observing More!", it'll be fine. The information is still there.

News Wire/Mission Summary - The old magazine lacked quick turnaround on recent happenings. This partially makes up for the reduced content in News Notes.

Computing - This is as unfair as saying the ATM section got worse. There's simply more computer power, and more interesting projects are available to everybody. Not too many folks are programming HP calculators anymore.

Sky Guide - Some say it has become glitzy, but I think it's just more readable. Good additions included the calendar, relative sizes of the planets, and the Solar System diagram. That table contains the same information as the 1982 table. Just because it isn't typed in a somber black on gray doesn't make it less serious. I should mention though that I find their new detachable sky chart unreadable in the field next to Lovi's.

No star party coverage - I'm happy to see this getting dedicated coverage in the pages of "Amateur Astronomy" and this newsgroup. Occasional star party coverage is fine now that there are so many of them, but that Stellafane article every year sure got tedious.

The Cover! - Some people don't like text over the picture, and find it too tabloid-ish in appearance, but I was left with one impression from the '82 cover, which shows a partially eclipsed sun setting over Paris. For a magazine with the word "sky" in it's title, that may be the ugliest example of sky that has ever been captured on film.

So if you counted up the words in 1982, I imagine you'd come up with something like twenty percent more in forty less pages than they take today. You would learn more about books, comets, and what the pros are doing, but you'd lose product reviews, Focal Point, and technical imaging articles. In a nutshell, I think the articles lost depth, but gained wider coverage of the subject. I'm convinced that professional and amateur astronomy is much more interesting now than it was 15 years ago, so there's more to cover. Beside the occasional Caldwell Catalogue and Sidereal Eye article, there's not much that I want discarded from current issues.

I don't think you can learn everything "on the streets"

without the 90 percent noise factored in, so I still like S&T despite the changes. I guess I'm not a grumpy old man yet.

Editor's Note: Tom originally posted this article on The Usenet Newsgroup Sci.Astro.Amateur.

Dark of the Moon Table - Oct 1997

OBSERVING NIGHT	START OF DARK		OBSERVING NIGHT		START OF DARK		END OF DARK		TOTAL DARK	
	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
WED/THURS	10/1 7:35 PM	EOT	SUN/MON	10/19 7:13 PM	EOT	10/19 9:06 PM	MR	1:53		
THURS/FRI	10/2 7:34 PM	EOT	MON/TUES	10/20 7:11 PM	EOT	10/20 9:58 PM	MR	2:47		
FRI/SAT	10/3 7:34 PM	MS	TUES/WED	10/21 7:10 PM	EOT	10/21 10:52 PM	MR	3:42		
SAT/SUN	10/4 8:11 PM	MS	WED/THURS	10/22 7:09 PM	EOT	10/22 11:46 PM	MR	4:37		
SUN/MON	10/5 8:52 PM	MS	THURS/FRI	10/23 7:08 PM	EOT	10/24 12:40 AM	MR	5:32		
MON/TUES	10/6 9:37 PM	MS	FRI/SAT	10/24 7:07 PM	EOT	10/25 1:34 AM	MR	6:27		
TUES/WED	10/7 10:26 PM	MS	SAT/SUN	10/25 7:06 PM	EOT	10/26 2:27 AM	MR	7:21		
WED/THURS	10/8 11:20 PM	MS	SUN/MON	10/26 7:05 PM	EOT	10/27 3:20 AM	MR	8:15		
THURS/FRI	10/10 12:19 AM	MS	MON/TUES	10/27 7:05 PM	EOT	10/28 4:12 AM	MR	9:07		
FRI/SAT	10/11 1:22 AM	MS	TUES/WED	10/28 7:04 PM	EOT	10/29 5:06 AM	MR	10:02		
SAT/SUN	10/12 2:27 AM	MS	WED/THURS	10/29 7:03 PM	EOT	10/30 5:22 AM	SOT	10:19		
SUN/MON	10/13 3:35 AM	MS	THURS/FRI	10/30 7:02 PM	EOT	10/31 5:22 AM	SOT	10:20		
MON/TUES	10/14 4:44 AM	MS	FRI/SAT	10/31 7:01 PM	EOT	11/1 5:23 AM	SOT	10:22		
TUES/WED	none	none	SAT/SUN	11/1 7:00 PM	EOT	11/2 5:24 AM	SOT	10:24		
WED/THURS	none	none	SUN/MON	11/2 7:35 PM	MS	11/3 5:25 AM	SOT	9:50		
THURS/FRI	none	none	MON/TUES	11/3 8:23 PM	MS	11/4 5:25 AM	SOT	9:02		
FRI/SAT	10/17 7:15 PM	EOT	TUES/WED	11/4 9:15 PM	MS	11/5 5:26 AM	SOT	8:11		
SAT/SUN	10/18 7:14 PM	EOT	WED/THURS	11/5 10:12 PM	MS	11/6 5:27 AM	SOT	7:15		

Bernie Sanden

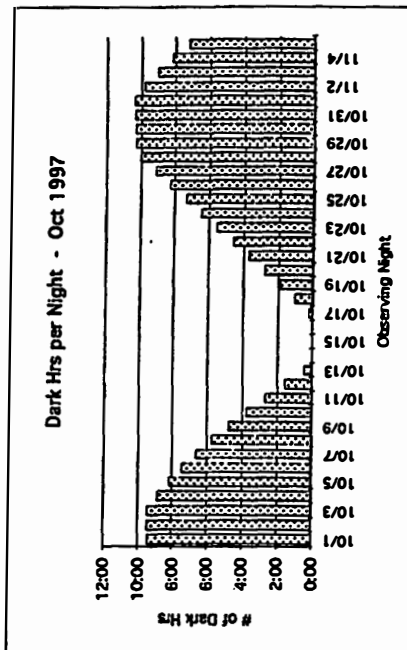
NOTE: Applies to Phoenix area (Mtn Std Time)

MS = Moonset

SOT = Start of Twilight

MR = Moonrise

EOT = End of Astronomical Twilight



•ROBERT BURNHAM, JR.  
 •SKY & TELESCOPE  
 •ADAPT-A-HIGHWAY  
 •SATURN OCCULTATION  
 IN THIS ISSUE

Valued member since Mar 16, 1997  
 Next EVAC Meeting — October 8th



**EAST VALLEY ASTRONOMY CLUB**  
 Robert G. Kearney, Jr., Editor  
 2120 W. 8th Ave.  
 Mesa, AZ 85202

**EAST VALLEY ASTRONOMY CLUB—1997**

EVAC Homepage—Closed for repairs

President:	Vice-President:	Treasurer:	Secretary:	Properties:
Sheri Cahn	Tom Polakis	Silvio Jaconelli	Aaron McNeely	Frank Honer
841-7034	967-1658	926-8529	954-3971	971-9468

**MEMBERSHIP&SUBSCRIPTIONS:** \$20.00 per year; renewed in Dec. Reduced rates to *Sky&Telescope* and *Astronomy* available. Contact Silvio Jaconelli, 1700 E. Lakeside Dr. #59, Gilbert, AZ 85234 (602) 926-8529.

**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.

**NEWSLETTER:** Mailed out the week before the monthly Club meeting. Send your thoughts and stories to: Bob Kearney, 2120 W. 8th Ave, Mesa, AZ 85202, (602) 844-1732. Email to—starjb@ix.netcom.com

**CHANGES:** Address, Phone Number, or Email: send to Sam Herchak, 145 S. Norfolk Cir, Mesa, AZ 85206, (602) 924-5981. Email to— 76627.3322@compuserve.com

**EVAC LIBRARY:** The library contains a good assortment of books, downloaded imagery, and helpful guides and is usually brought to the Club meetings. Contact Frank Honer for complete details, (602) 971-9468.

**BOOK DISCOUNTS:** Great savings for members through Kalmbach and Sky Publishing. Contact Aaron McNeely, 4402 N. 36th St. #22, Phoenix, AZ 85018, (602) 954-3971. Email to—amcneely@primenet.com

**EVAC PARTY LINE:** Let other members know in advance if you plan to attend a scheduled EVAC observing session. Contact Robert Kerwin, (602) 837-3971. Email to—p24493@email.mot.com