East Valley Astronomy Club

January Newsletter 1995

EVAC HIGHLIGHTS

The December business meeting was opened by Don Wrigley who introduced a couple of visitors, summarized upcoming events, talked about the Mountain Shadows Star Party, and then gave the floor to half a dozen members who had announcements. These announcements are summarized below. Club T-shirts were handed out as the formal portion ended and out came the refreshments and snacks. Members renewed for 1995 and continued discussing items of interest until 9:30 or so.

Messier Marathon Observer's Guide

Paul Dickson brought a newly obtained copy of the above book written by Don Machholz. The author is an accomplished comet hunter and serves as the Comet Recorder for the Association of Lunar and Planetary Observers. His book contains history on Charles Messier, the catalog of "M" objects, and how to view all of them in one marathon night. Paul plans to write a review on the book after using it for the April Messier Marathon. You can obtain your own copy for $14.00 from: Make Wood Products
P.O. Box 1716
Colfax, CA 95713
(916) 346-8963

EVAC Bookmobile

As the new properties manager for EVAC, Steve O'Dwyer made a request for anyone holding Club books, software, etc. to contact him so he can complete an inventory. He also announced plans to bring the Club's library to each meeting making it very convenient for members to check-out and return books. A great idea (and a lot of work). Thanks Steve. The two "loaner scopes" owned by the Club were discussed and the subject of scope donations came up. If someone you know is looking to donate a telescope to receive a tax deduction, have them contact Scottsdale Community College or the Club for the details. Properly done, these gifts can be a great benefit to all.

Spica Graze

Not to be confused with the **total** occultation of the star Spica in January, Gene Lucas spoke on the **grazing** occultation of the same star in June. These rare and spectacular events are only visible along a narrow ground track (about 2 miles wide) and the June 8th graze path lies on top of Phoenix! Don't leave on vacation that week. Watch for more details as the date approaches.

Membership Renewals

Sheri asks that all renewal monies be accompanied by a completed Membership Form. The information provided goes into a database kept by Bill Smith who then generates a membership list. Hopefully this list will go out to members around February and include e-mail addresses for you computer operators.

Observatory Tour

Tom Polakis announced the possibility of a special tour of the Steward Observatory Mirror Lab and **maybe** the brand new 3.5 meter WIYN telescope at Kitt Peak for about 40 Club members this summer. Details will be published as they become available.

UPCOMING CLUB EVENTS

EVAC Business Meeting, Jan. 11, 7:30 PM
SCC, Physical Sci. Bldg, Room PS 172

Board of Directors Meeting, Jan. 14, 1:00 PM
Bill Smith's house, near Fiesta Mall

Deep Sky Star Party, JAN 28, Sunset 5:58 PM
Vekol Road Site

Local Star Parties, FEB 4, Sunset 6:02 PM
Florence Junction and Carefree Sites

Jupiter Collision Revisited

Initial observations of Jupiter (now in the pre-dawn sky) indicate visible changes to it's atmosphere still exist although very subtle compared to the original impact spots. Speaking of Comet Shoemaker-Levy, Tom Polakis also said David Levy is looking for personal observations and accounts of the "Great Comet Crash" for a future book. See *The Observer* later in this newsletter for more information.

JANUARY GUEST SPEAKERS

Our speakers for the January business meeting will be Jan and Randy Iliff. They have several dozen high quality slides of the November '94 total solar eclipse and their week long visit to northern Chile. The eclipse shots were taken through an 80MM Televue Pronto and show exquisite detail of various limb phenomena observed during totality.

PRESIDENT'S CORNER
by Don Wrigley

I find it somehow aesthetically pleasing that this New Year begins on a Sunday, the first day of the week, with a New Moon to boot! This sort of celestial arrangement seems to invite introspection, self evaluation, thoughts of "new beginnings", and those gosh-awful resolutions. I personally have never thought much of those ill-fated attempts at self improvement, but I am not made of stone either. Since even the heavens themselves seem to have cried out for it, I feel compelled to join in the tradition and make the following non-binding resolutions:

1. I hereby resolve not to engage in the sins of:
   Aperture envy—size isn't everything!
   Eyepiece envy—big names are overrated.
   Knowledge envy—anyone can quote statistics.

(I will however , continue to covet electronic imaging equipment and RVs, especially heated ones.)

2. I resolve to make every effort to attend all star parties and not to wimp out just because I might be tired or depressed, sick with the flu, having major surgery, or any of the other excuses we come up with when we don't want to drive out to the site because it might be excessively hot, cold or raining.

3. I further resolve to keep my optics collimated, my outlook cheerful, and my hands in my own eyepiece case! HAPPY NEW YEAR!

WHAT'S MISSING THIS MONTH?

The Deep Sky Notebook by Robert Kerwin, that's what! Over the years Robert put a lot of time and effort into that column and unfortunately for us, it's taken a toll on him and no longer will be a regular feature. If you enjoyed his articles as much as me (I saved them all), please be sure to let him know. Thank you Rob! What do you think about re-printing his earlier works?

MOUNTAIN SHADOWS RESORT

Camelback Adventures is organizing after-hour activities for a convention at the Mountain Shadows Resort near Camelback Mountain. If EVAC provides telescopes for the group on January 18th, they have agreed to make a **sizeable** donation to the Club. Scopes should be set up at 6:00 PM and observing is scheduled to last until 10:00 PM. Expect to be well cared for while you are there. Contact Don Wrigley if you can help. 982-2428.

TEACHER'S WORKSHOP

Arizona State University is hosting a teacher's workshop for public schools and has asked EVAC to provide a dozen members and their telescopes on February 4th starting at 6:30 PM to better acquaint these teachers with astronomy. The potential for expanding our kids knowledge and interest in astronomy through these educators is enormous. Please contact Bill Smith if you can possibly help with this important project. 831-1520.

THE HISTORY OF EVERYTHING
by Dr. Chris Impey

On January 17th at 7:00 PM the Astronomy Club of Sun City West is hosting this program at the R.H. Johnson Lecture Hall. Dr. Impey is a theoretical cosmologist from the Steward Observatory, University of Arizona, in Tucson. The program is free and open to the public.

EVAC OFFICERS

President:	Don Wrigley	982-2428
Vice-President:	Robert Kerwin	837-3971
Treasurer:	Sheri Cahn	246-4633
Secretary:	Sam Herchak	924-5981
Properties:	Steve O'Dwyer	926-2028
Newsletter:	Sam Herchak	924-5981
	Bob Kearney	844-1732

The Observer
by Tom Polakis

What a Week!

I have a very disorganized folder in my files called "Comet SL9". Working from back to front, it starts with a rather cautiously written newsletter article I put together for the East Valley Astronomy Club. Just following the lead of the discoverers, I wrote phrases like "look for subtle changes in the Jovian atmosphere." Sure is nice to be wrong!

From this point forward in the file are pre-impact time predictions that show increasing levels of confidence as July 16 approaches. Some Frequently Asked Questions that Paul Dickson downloaded from the Internet round out the pre-impact sheets. Again, words of caution appear: "Without a large (>15"?) telescope and a good detector, little is likely to be seen."

The file becomes increasingly disorganized from this point forward. E-mailings from friends as far away as Australia and CompuServe postings dominate the folder. Here's a look at some of the highlights from my accounts of that week:

Saturday, July 16: We set up at Kevin Gill's house in northern Phoenix. Dale Burlinham and Kevin set up on the balcony while Rich Walker, Bernie Sanden and myself have our 13-inchers at the ready. There's going to be an impact of Fragment B, slated to occur just after Sunset. We've heard word on CNN that something has really been observed but remain skeptical. The temperature is in the low 100's just after Sunset, and there are some reasonably large sucker holes in the monsoon layer. We're glued to the eyepieces, but beside a few jokes about seeing a flash, nothing happens. We head back inside to see that something really is happening. Kevin downloads the first of what will be dozens of incredible graphics files loaded onto CompuServe. It's a four-image sequence taken from Calar Alto in infrared wavelengths of the impact of Fragment A. There on the limb, below the Great Red Spot is a flash rivaling Io in brightness. You can hear our jaws hitting the floor! Meanwhile, the discoverers are turned into celebrities. There are David Levy and the Shoemakers beaming in a CNN interview. We start reading the earliest reports of scars left over by the first impacts.

Sunday, July 17: By now, it has become very clear from the postings that these impacts are going to be visible in our scopes. But the monsoon hasn't failed us. It is miserably cloudy and showing no sign of clearing. This can't last all week, can it?

Monday, July 18: No it isn't going to stay cloudy! Clear blue skies prevail at Sunset. The same group that met on Saturday are set up in their backyards well before Sunset searching for the planet. I find Jupiter at Sunset, and can't believe what I'm seeing! Right where they should be are two black spots. Not gray, but black; like no planetary detail you've ever seen. I gotta tell these guys. But there are already a couple messages on the machine. Rich leaves something that goes like, "I HAVE SEEN THE SPOTS... THIS IS GREAT...I'VE GOT TO GO BACK OUT AND LOOK NOW." Kevin has seen them too. And so have Steve Coe and Pierre Schwaar. We have unwittingly established a telephone network that has us running between our backyards and our telephones. As the planet rotates, the order of the spots becomes more apparent. The procession of Fragments C, A, and E across the planet are a beautiful sight. Fortunately, the planet is in the muck at a reasonable hour, leaving us to check out what's coming over CompuServe until unreasonable hours. "Instant science" reports are coming in from the observatories, GIF files are being downloaded from the Internet at a record pace, and amateur postings fill the special "SL9" section of Astroforum. What a great time to live in the information age! The first of the Hubble Space Telescope images start to make their way across the lines. These will prove to be the best images of the impact sites.

Tuesday, July 19: Still clear. I have a conflict with an ultimate frisbee scrimmage which I have been attending religiously. No reason to let that stop me from setting up the scope. Under the lights of nearly downtown Tempe, my teammates get a great view of what turns out to be the best display of the week. Fragments K and L have freshly fallen in, and the remaining spots are obvious to everybody, including those who have never looked through a telescope. Some are commenting about how nice it is to hear about Jupiter in the news rather than people harming each other. I play in the scrimmage, but take a break every half hour to watch new details rotate into view. Later, I can't resist taking a look at the forum, where there are megabytes worth of new images and some very interesting reports. People are spotting these things with 2-inch department store scopes.

Wednesday, July 20: The monsoon returns, and we're back to cloud dodging. Some of us are noticing how good we've become at assembling and disassembling our scopes. Bernie Sanden, Pierre Schwaar, and I set up outside of Tempe Library - a site that always provides one of the most receiving public audiences. By now, everybody knows what we must be looking at. Some real trying moments ensue when clouds cover up Jupiter while long lines of expectant people crowd our >

telescopes. Fortunately, Pierre keeps them entertained with videotape he has taken from the previous night. When it finally clears, there is a near absence of obvious impact sites. It just happens that the fresh ones are on the back side. Site K saves the day by rotating into view when the folks are looking for a show. It just gets better and better as the lone spot traverses the disc. Pre-school children are asking if "the black thing on the bottom" is it. Yes it is. Bernie and I race back to his place to watch an impact in real time, but the seeing is just too soft by then. Rich Walker, who has driven all the way to Table Mesa in a heroic cloud-dodging effort, later reports a very subtle plume at the correct time.

Thursday, July 21: It has now become a kind of routine to get home from work and download the latest images from the observatories. Those color Hubble shots are the greatest. Kevin, Dale, and I set up in the Desert Botanical Garden, which is a great place to be at night, comet or not. The skies have broken clouds, but other than some nervous moments, the crowd gets to see another great display. This group is very enthused and, by now, the public is as well informed as we are. Still, something about describing those spots as "Earth-sized" generates some awe. Kevin later comments on how this was one of his favorite public viewing experiences.

Friday, July 22: The last fragments have augered in and the show is over, but the science and the storytelling have just begun. I had a flight to catch to Michigan for a week vacation where I grew up. At my brother's house, we view a couple floppies worth of GIF files. It is especially rewarding being able to show my mother how I had spent the last week; she being the one who took us out to see the Tears of St. Lawrence (the Perseids) every August since I could remember.

NOTE:
David Levy is writing a book that will feature stories about amateur observations of the impacts of Comet Shoemaker-Levy 9. He is not looking for dry reports from the veterans as much as anecdotal information from novices, especially children. If you have anything to submit, send it via e-mail to 70721.1706 @compuserve.com. A postal address is not available.

THE GEMINIDS PERFORM
by Mike Sargeant

Stepped outside about 8:30 PM on the 13th to try my new contact lens prescription on the double-double in Lyra (didn't quite resolve the four of them). Within three minutes I had my first Geminid of the night, a long, slow, white east to west streaker to the north. I called son Jon out and after about 5 minutes he saw a "fast orange airplane" traveling west to east in the South, his first confirmed meteor. Just about the end of his attention span (maybe 9 minutes later) we caught a brief flash up high coming from the East followed shortly thereafter by another one. In 20 minutes of watching the evening of the 14th, nothing showed up.

ED NOTE: These observations by Mike were made from **downtown** Tempe, which goes to show you can observe the sky from anyplace. The only real show-stopper is clouds! I take that back; some of you may observe at portions of the spectrum other than the visible.

CAN YOU SAY "GEGENSCHEIN?"

The Gegenschein is even harder to see than it is to say and unlike most faint objects, does not improve with a telescope. One of the best times of year to spot this Solar System "object" and it's cousin, Zodiacal Light is approaching. Still confused? I'm talking about interplanetary dust, mostly confined to the inner Solar System and the Ecliptic plane, that is visible when illuminated by the Sun under the right conditions. Conditions are favorable in late January and early February to view both the Zodiacal Light and Gegenschein.

Let's start with Zodiacal Light. The evenings early in the year are when the Sun sets with the Ecliptic at a steep angle relative to the western horizon. At the end of evening twilight (7:30 PM on Feb. 1st) the Sun is far enough below the horizon for the sky to be dark but still brightly illuminate the interplanetary dust. From a dark site on a Moonless night you can easily see a pillar of light, bright as the Milky Way, extending along the Ecliptic plane 40 to 50 degrees above the western horizon. Because of it's nature (small dust particles), it appears very fuzzy and makes the Milky Way look well defined by comparison.

The Gegenschein or "counterglow" on the other hand is much smaller, much fainter, and appears directly **opposite** the Sun. The best conditions for spotting it is when the anti-solar point is high overhead in a star-poor region of the sky. Near midnight in late January the anti-solar point is near the constellation Cancer. Look for a faint, somewhat elliptical glow perhaps 10 degrees in size. But be honest with yourself and don't create something in your mind that you don't really see. Note the position and time if you see something. Later you can figure the actual location of the anti-solar point to "confirm" your sighting. There's a lot more information available on both subjects than I've presented. Read up on them but most importantly, go look for them! The next window of optimum conditions won't be until the Fall. (Editor)

WATCH FOR...

I saw a report of naked eye sunspots recently (large enough to be seen without a telescope). Proper filtering is **STILL** required to prevent damage to you eyes however. The Sun takes about 25 days to rotate just once so if you don't see any at first, try a week later. Let me know if you observe any.

Also and couple of members report Comet Borrelly now seems to be developing a tail. The comet is still small and relatively faint but more interesting now as it's features change.

BOARD OF DIRECTORS MEETING

The first and most important Board of Directors meeting is coming up on January 14th at Bill Smith's house in Mesa. The direction, the goals, and the activities for this year will largely be determined at this meeting. All Club Officers and Board members are asked to attend. Many people have made suggestions or expressed interest about more activities for the Club and Don would like to make these happen. But it won't happen if none of the members get involved. The Club will do as little or as much as you like.

Some of the proposed groups and their functions are listed below. If you are willing to support any of these groups, please contact Don Wrigley.

STAR PARTY GROUP—Handle requests for public star parties, set guidelines for what the Club can support, organize that support, etc.

MEMBERSHIP GROUP—Handle questions from potential members, create an informative handout for new members, etc.

FIELD TRIP GROUP—Organize occasional field trips/tours of astronomical facilities in the state.

REFRESHMENT GROUP—Bring refreshments to the EVAC business meetings, plan a hopeful Club cookout/star party, etc.

SIDEWALK ASTRONOMY GROUP—Introduce the general public to astronomy through sidewalk star parties in the tradition of John Dobson.

Please contact Don Wrigley (982-2428) or Bill Smith (831-1520) in advance if you plan to attend. The map to Bill's house is on the back of the newsletter.

IAU CIRCULARS

Paul Dickson provided the following information about subscriptions to receive the International Astronomical Union's Circulars. These Circulars are the official source for all discovery announcements regarding transient phenomena such as comets and supernovae. The monthly charge for Computer Service/e-mail is $6.00 and also gives you access to the Central Bureau/Minor Planet Center's orbit files and complete Circulars back to 1982. A full cross-referenced index back to 1922 is another feature. If anyone in the Club subscribes please keep me posted on discoveries that the membership at large would be interested in. To subscribe contact the:

Central Bureau for Astronomical Telegrams
Smithsonian Astrophysical Observatory
Cambridge, MA 02138
(617) 495-7244
iausubs@cfa.harvard.edu

NEWSLETTER

Many thanks to those who sent material or presented information at the business meeting. If you haven't renewed by press time for the February '95 issue (Feb. 7th), you won't receive future newsletters until getting caught up. EVAC is a non-profit organization but still needs money to operate. You'll find another Membership Form on the next page. Please send $20.00 and the completed form to Sheri Cahn if you haven't already done so. Lastly, I now have several more conversions that allow me to open PC .TXT documents if you want to submit material on a 3.5 inch floppy disk. Transmitting them as e-mail works great also. Paper is just as good and "snail mail" only takes a couple of days when mailed in the local area. Send to:

SAM HERCHAK
145 S. Norfolk Cir
Mesa, AZ 85206-1123
76627.3322@compuserve.com

FREE TO GOOD HOME

Sonotube from Meade 10 inch Starfinder Dobsonian. Hole cut for 2 inch focuser. Contact Lyle at 275-8375.

FOR SALE

Lumicon vinyl dust covers:
16 inch ID (fits 13 inch Coulter Dob): $15.00.
10.3 inch ID (for 8 inch scopes): $8.00
Call Sam at 924-5981

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 $20.00 annual dues.

Sheri Cahn, EVAC Treasurer
4220 W. Northern #116
Phoenix, AZ 85051
246-4633

Name _____ ***Please***
Address _____
_____ Zip ***Print***
Phone # _____
E-mail address _____

( ) New ( ) Renewal ( ) Change of address

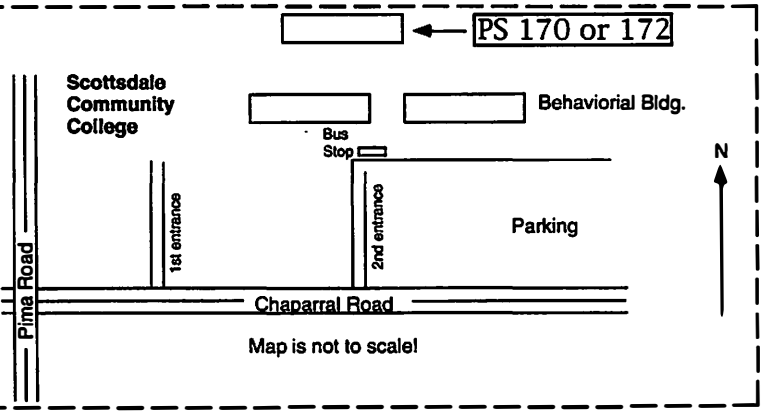
Major area(s) of interest:
( ) General observing
( ) Lunar observing
( ) Planetary observing
( ) Telescope Making
( ) Astrophotography
( ) Deep Sky
( ) Other_____

Enclosed:
___$20 annual
___$15 April - Dec.
___$10 July - Dec.
___$ 5 Sept.-Dec.

It is not necessary, but do you currently own astronomy equipment?
( ) Yes ( ) No
If yes, please describe. _____
How did you hear about the East Valley Astronomy Club? _____

CLIP AND SAVE

Monthly business meetings are on the Wednesday nearest to the full moon.



East Valley Astronomy Club

February 1995

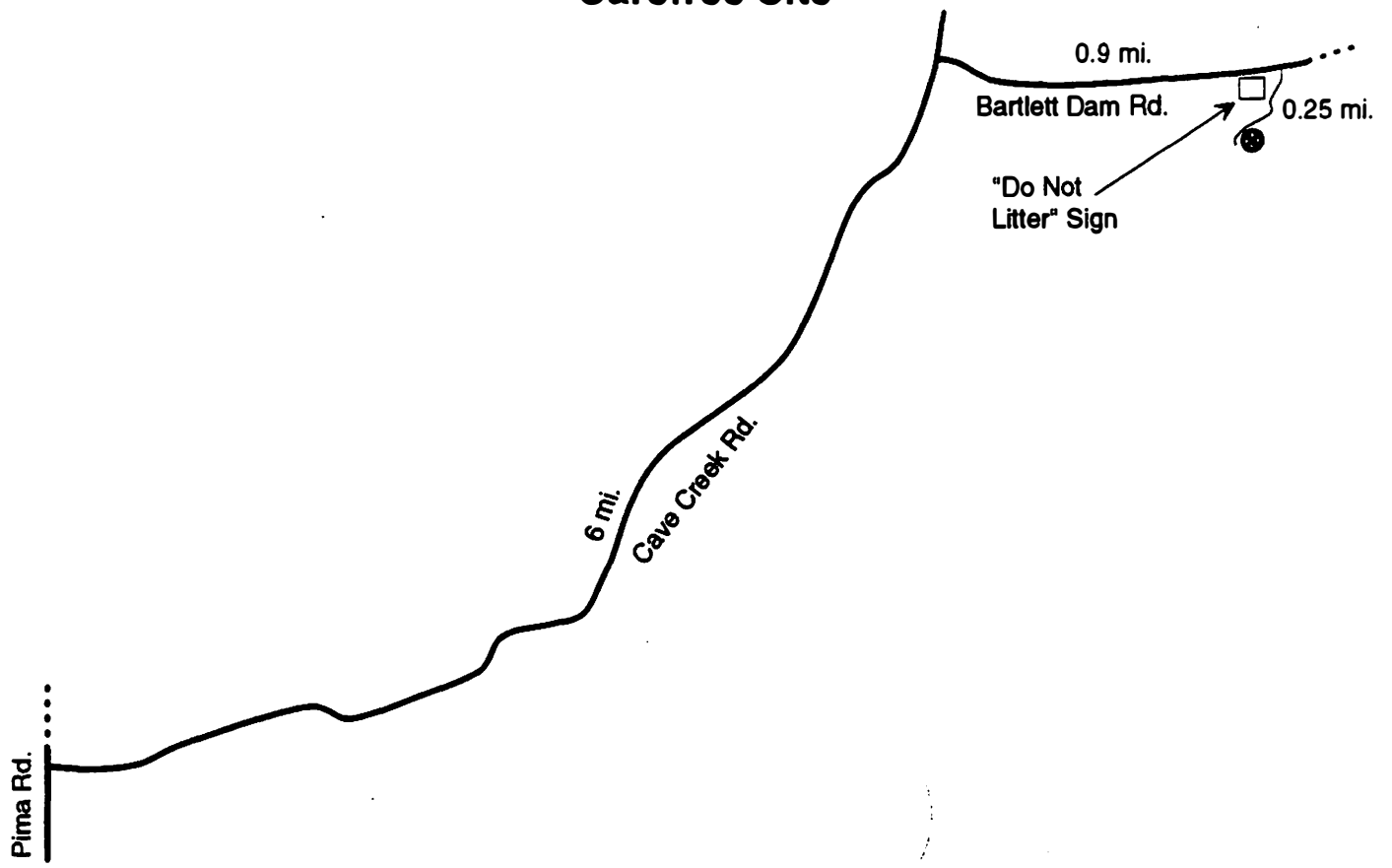
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30 ● *11:20 PM RW Tauri min Sunset: 5:55 PM Sunrise: 7:22 AM	31	1 *ALL MONTH NOTES	2 *Moonset 9:11 PM *Lunar Libration	3 *Moonset 10:08 PM	4 Local S Parties *Moonset 11:05 PM *6:30 AM Galilean moon *6:30 PM ASU S P
5 *Moonset next day *7:07 AM Galilean moon	6 *Moonset 12:02 AM *4:16 AM Galilean moon	7 ◐ *Moonset 12:56 AM	8 *Moonset 1:49AM *4:28 and 6:34 AM Galilean moons	9 *Moonset 2:40 AM	10 *Moonset 3:29 AM *5:24 AM Galilean moon *7:30 PM SAC Mtg	11 *Moonset 4:16 AM *MARS CLOSEST
12 *5:13 and 5:42 AM Galilean moons	13 *4:03, 5:02, and 6:13 AM Galilean moons Sunset: 6:08 PM Sunrise: 7:10 AM	14 *Lunar Libration	15 ○ 7:30 PM EVAC Mtg *5:52 AM Galilean moon *Lunar Libration *10:19 PM Algol at min	16	17	18 *Moonrise 9:51 PM *7:08 PM Algol at min
19 *Moonrise 10:53 PM *5:23 and 5:26 AM Galilean moons *8:30 AM Spica-Moon	20 *Moonrise next day *4:45, 5:58, and 6:55 AM Galilean moons	21 *Moonrise 12:01 AM *5:27 AM Galilean moon	22 ◑ *Moonrise 1:04 AM	23 *Moonrise 2:06 AM	24 *Moonrise 3:04 AM	25 *Moonrise 3:57 AM
26 *4:43 and 5:32 AM Galilean moons *5:45 AM Venus-Nept conjunction	27 *6:39 AM Galilean moon *Lunar Libration Sunset: 6:20 PM Sunrise: 6:55 AM	28 *3:56 and 4:57 AM Galilean moons	1 ● *1822 Young Moon	2	3	4 Deep Sky S P

All times are LOCAL - add 7 hrs for Universal Time

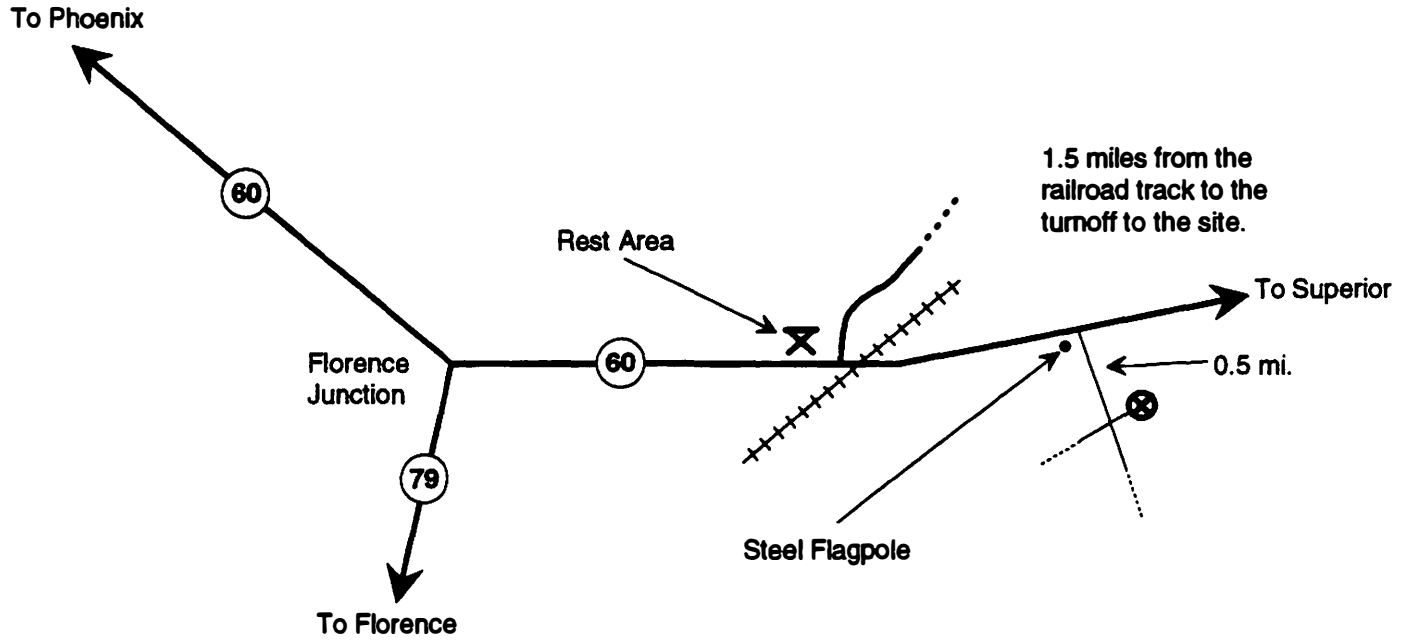
Flip over for event details

Date	Start	Title	Description
2/1/95	12:00 AM	ALL MONTH NOTES	CALENDAR NOTES: The small "degree" symbol in front of events in date blocks are beyond my control. They simply seperate events. I did figured out how to get the Moon symbols turned on though. Times for "Galilean moons" refer to eclipses, transits, occultations, etc of Jupiter's four largest satellites. Consult ASTRONOMY , SKY & TELESCOPE magazines, or almanacs for the exact event or just go out and watch what happens. Based on input from the membership, times are now AM or PM instead of the "24" hour clock. It's a good idea - what other ones do you have? PLANETS: MERCURY low in AM sky and difficult to observe. VENUS still brilliant in AM sky at -4.2 mag but moving toward Sun in the SE sky and appearing lower each day. In conjunction with Neptune on FEB 26. MARS makes it's closet approach this month and swells to 14 arc seconds in diameter and -1.2 magnitude. High overhead and well placed for observation in late evening sky. JUPITER rises about 3 AM but remains low in the sky because it's found in the southerly constellation of Scorpius. SATURN closes on the Sun and is not visible by month's end. URANUS and NEPTUNE rise before dawn and share the AM sky with Venus late in the month. PLUTO now visible for those up early with their telescopes. A good finder chart and dark skies a must as it appears star-like at only 13.6 mag. OBJECTS OF INTEREST: Comet Borrelly , Zodical Light, Gegenscheln, asteroids Ceres, Vesta, and Flora. See magazines for details.
2/2/95	12:00 AM	Lunar Libration	More of Moon's E limb exposed (6 degrees worth) due to the " rocking" motion of the Moon called libration.
2/4/95	12:00 AM	6:30 PM ASU S P	Star party at Arizona State University for Teacher's Workshop. Contact Bill Smith if you can help. 831-1520
2/10/95	7:30 PM	7:30 PM SAC Mtg	Grand Canyon University, Fleming Bldg, Rm 105. Camelback and 33rd Ave.
2/11/95	5:00 AM	MARS CLOSEST	Today is closet approach but well placed for viewing all month.
2/14/95	12:00 AM	Lunar Libration	7 degree libration of N Lunar limb.
2/15/95	1:00 AM	Lunar Libration	5 degree libration of W Lunar limb.
2/15/95	10:19 PM	10:19 PM Algol at min	"Demon Star" now low in the NW sky by midnight.
2/18/95	7:08 PM	7:08 PM Algol at min	
2/19/95	8:30 AM	8:30 AM Spica-Moon	Moon passes 0.9 degrees north of the 1st magnitude star Spica at 10:00 AM when below W horizon. Look around 8:45 before it sets for an excellent opportunity to view a star with your telescope in the DAYTIME!
2/26/95	5:45 AM	5:45 AM Venus-Nept conjunction	Venus passes 0.7 degree North of Neptune at 3:00 AM when below the eastern horizon. Look for them at 5:45 AM just before dawn instead. Uranus lies 4 degrees east of this pair and 1 degree NW of M75 but is only 5 degrees above horizon. Waning cresent Moon also nearby.
2/27/95	12:00 AM	Lunar Libration	7 degree libration of S Lunar limb.

Carefree Site



Florence Junction Site



BOARD OF DIRECTORS MEETING
The Smith's Residence
Phone 831-1520

EAST VALLEY ASTRONOMY CLUB
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Valued EVAC member since 1/17/92!