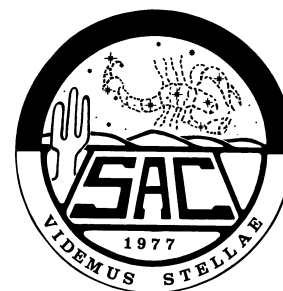


# Saguaro Astronomy Club

Metro Phoenix, Arizona

## SACNEWS



July 1994 — Issue #210

v6.23

## A Marathon Night: Thoughts on the Messier Marathon '94

by Bernie Sanden

*I didn't consider it.* Long enough work week, this'd have to be like more of the same. Tom & I are going anyway, should be some scopes there. I don't know about AZ City (where?). I'll follow. Some hope for a clearing if that southern cloud band stays low. Pack up the 12.5" f/5 newtonian and head out.

Hey, lots of scopes! There's A.J. and Paul, Gus, Steve, and some of the EVAC folk. Bunch of new faces, at least to me. Here comes Pierre with his video, hope my weary mood's not forever ingrained on his tape. Tough ride, long week, and now that southern band of clouds is almost overhead...kind of frustrating. Relax, count your blessings! Well, maybe we'll get a good view of Jupiter like last year at Sentinel when the sky started out so bad. Pull out the scope and set'er up.

Here comes a beater of a truck...looks like a bass boat chair rigged to it. What the?...and they're staring at us?! Kinda mutual. They want to know what we're hunting?!? Steve'll set'em straight (nice if they'd stick around so we could show 'em something, but the clouds look worse than ever). People hunting rattlers now. Hey, don't chase 'em our way!!! Weird thought. Keep looking up. Those clouds are moving fast. "Ya know, Pierre, it just might clear." Boy all of a sudden I'm perked a bit. There's one of those Meade Dobs. Check it out later...guy who owns it seems friendly enough.

A.J. is up on a ladder addressing the group about the Marathon. Lots 'o' interest, look at 'em gathering around to get the forms. I didn't.

"Hey, Pierre, it really is going to clear!!" Let's see...the M51 supernova is still visible, comet McNaught-Russell...sky's not too bad. Guy with the 10" Dob...hey, mind if I take a look? Alright! Not bad. M78 looks nice, yeah...that's it (he must be working on the Marathon). I'll go mess with my scope and leave him alone. Sure got quiet—a lot of folks doing the Marathon. You know, I

### Quick Calendar

**SAC Star Party**  
Buckeye Hills Recreation Area  
**Saturday, July 2**

**SAC Meeting**  
**7:30, Friday, July 22**

**SAC Deep Sky Meeting**  
14 more of 110 Best NGC  
**7:30, Thursday, July 28**

**SAC Star Party**  
Buckeye Hills Recreation Area  
**Saturday, August 6**

never tried it...wonder if I'll ever regret not doing one? Probably never have seen all the M objects, now that I think of it. You know, it's not too late...Easy to get caught up in the atmosphere of the Messier hunt...*I considered it.*

"Hey A.J., got any forms left? Thanks." O.K. here I go...M76, 'little dumbbell'...wow that was easy. M34, M79...still up high enough. It's not too late! Yeah, Tom, I decided to see how far I can get. Ought to do it once in my life. I'll at least write a little description by each one to verify to myself and whoever. Just checking it off seems so trivial. Deep down, I'm not too sure about Virgo. I've never tried serious navigation of that before. The Pleiades—M45...get out the binos. Now lets see Merope with the 20 Plössl in the scope. Can't make out nebulosity, it's still kind of light out. M42, 43, 78. I've always liked M35 with that small open cluster NGC 2158 next to it. You know, this is alright. I'm not rushing, not at all what I'd call work. M38, 36...oh, man! M37 always looks good!

### SAC Officers

President	Bob Gardner	274-5046
Vice President	Susan Morse	934-7496
Treasurer	Carol Lee	946-9206
Secretary	A.J. Crayon	938-3277
Properties	Pierre Schwaar	265-5533
SACNEWS Editor	Paul Dickson	862-4678
Public Events	Rich Walker	997-0711

Except for that distracting line of lights on the northwest horizon, it's relatively dark out here. M41, 50, 47. Nice view of the planetary ring in M46...get some power on it. Seeing still isn't that great, but not too bad. M67, 44...get the binos out again. Now I'm starting to feel the long week catching up with me...and here comes the galaxies...

Got my technique down—Telrad to 20 or 32mm Plössl. If I don't pick it up in a few seconds of sweeping, go to the finder (can't miss it, just about every 'M' object is a show piece), then put the 9 or 13mm Nagler in for a close-up. Nice detail in M65, 66 and NGC 3628. O.K. here's where it gets weird: M40. Good thing the guy next to me has the Messier Album. Oh, the double star (M40) makes a right triangle with the star Ursa Major 70. and the little spiral NGC 4290. There it is...headlights! More Coma galaxies. Need a snack before I tackle Virgo. Man, almost blanked out sitting here, I'm really beat. Still, I think I'll finish (whatever that means). Tom brought along the latest Sky & Tel with Alan MacRobert's Virgo Cluster galaxy-hop in it. "Sure I'll borrow it, thanks." Get back to the 'event.' Let's see, there's the Bunsen Burner asterism...M60 to the rabbit ears galaxies to M100, 98 and 99. Pierre and Tom are talking about Shoemaker-Levy...did they see it? I'd stop and look, but I'm precariously groping in Virgo right now (one false move and...aww, where am I again!). There's M87, wow does it look bright after searching out all the others. All finished with Virgo! Nice feeling (kind of funny though, getting lost around M91 three times). Here's my reward—M104, the Sombrero. Looks awesome with that dark lane. M51—there's the supernova; galaxy appears to have a double nucleus.

Man, it's 2 AM and I got 40-some objects left! Quicken the pace some. M102...based on these coordinates it's this little spiral bracketed between two stars—I really doubt Messier saw that! Album says M100=102.

Great math. Kind of feel for old Messier, what he missed (described globulars as 'nebula without star'). If he only knew. Gotta quicken the pace. Peel through the globulars. Milky Way is getting up there, see some knots and dark lanes. A lot of these Ophiuchus and Sagittarius globs look the same at low mag, at least at the speed I'm going...hard to find different words to describe them. Ahhh, here's open cluster M11...I could stop here awhile...no, better keep moving. Zip through more globs...I guess I see where the criticism of marathons come from...I wouldn't call this 'observing'. More like shooting clay pigeons. See it, BAM! Those bass-boat-chair guys were right, we're hunting. Look it up, stare 2 seconds, BAM!...check it off. Deep-Sky fast food. I'm really enjoying this, nevertheless. What's next?

Uh oh, I see some dark blobs coming in from the northwest (and I'm fairly certain they're *not* roving Bok globules). M55 might look good with more power, but no time. Is it getting lighter? Milky Way still blazing overhead. M71, M27. Now the clouds are patchy all around. M72 & 73 through a suckerhole. Now I'm fighting clouds. M29 is kind of a wimpy cluster, very loose and star-poor. No time to be a critic, clouds and twilight taking over. M2 & M15...obvious in finder, keep low power in focuser now and sweep. A twinge of apprehension (competitive adrenaline?) runs through—someone shouted out M30 a while ago and now a cloud band is blocking the area. I can't seem to find the stars of Andromeda either. Sweeping, sweeping...I'll have to come back to these later. M39 is sparse, M52 rich by comparison. Lord, why did you put that cloud in front of Andromeda? Go back to M30, but with clouds all around I can't make out where to point and sweep. Don Wrigley just called out M31. He found Andromeda! "Hey, Don, where are you looking. Oh, I'm way off. Thanks." Oh, now I see it in my scope. It's

## SAC and SAC Meetings

Saguaro Astronomy Club (SAC) was formed in 1977 to promote fellowship and the exchange of scientific information among its members—amateur astronomers. SAC meets monthly for both general meetings and star parties, and regularly conducts and supports public programs on astronomy.

SAC meetings are usually held on the Friday nearest the full moon. This means that over the course of the year, meetings are not held on same week of the month. The same is true of the club's star parties. Star parties at Buckeye Hills are mostly held on the Saturday of the third quarter moon.

### 1994 SAC Meetings

Jan. 28  
Feb. 25  
Mar. 25  
Apr. 22  
May 20  
Jun. 24  
Jul. 22  
Aug. 19  
Sep. 16  
Oct. 21  
Nov. 18  
Dec. 17 Party

### 1994 SAC Star Parties

Date	Sunset	Moonrise
Jan. 8	5:38pm	5:22am
Feb. 5	6:05pm	4:11am
Mar. 5	6:29pm	2:58am
Apr. 9	6:55pm	5:42am
May 7	7:16pm	4:17am
Jun. 4	7:34pm	2:52am
Jul. 2	7:42pm	1:27am
Aug. 6	7:24pm	6:09am
Sep. 3	6:51pm	4:56am
Oct. 1	6:14pm	3:40am
Oct. 29	5:40pm	2:24am
Nov. 26	5:22pm	1:12am

getting so light I can only see the core of M31 and one of its companions above (M32 or M110?). Think it's 32. Can't detect the other one. Oh well, clouds just shut it out again. Really getting light now. Try one more time

for M30. Below those four stars...there it is!! Hey look guys, it's resolved to the core and it's full twilight! That makes 106 objects. Ought to be satisfied with that. Don and Frank got 107. I was so close. Oh well, they deserved

# Comet Comments

by Don Machholz

(916) 346-8963    CC191.TXT    June 8, 1994

Comet Russell (1994p) has dimmed by three magnitudes recently. Meanwhile Periodic Comet Shoemaker-Levy 9 is expected to hit Jupiter beginning July 16. An

additional report is included with this newsletter.

**Periodic Comet Brooks 2 (1994j):** This comet was recovered in early May by both A. Nakamura and T. Seki of Japan. Then at magnitude 18, the comet should brighten to mag. 14 by October. The orbital period is 6.9 years.

**Periodic Comet Shoemaker (1994k):** Carolyn Shoemaker discovered this comet on May 14 on films exposed through the 0.46-meter Schmidt at Mt. Palomar. The comet has an orbital period of 15.5 years and will reach perihelion in late October at 2.92 AU. It will not get much brighter.

Comet	Takamizawa-Levy		(1994f)		
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	12h19.9m	+55° 59'	73°	E	9.9
06-27	12h03.4m	+51° 55'	69°	E	10.2
07-02	11h52.7m	+48° 23'	65°	E	10.4
07-07	11h45.5m	+45° 19'	61°	E	10.7
07-12	11h40.7m	+42° 39'	57°	E	10.9
07-17	11h37.4m	+40° 19'	53°	E	11.2
07-22	11h35.3m	+38° 16'	49°	E	11.4
07-27	11h34.0m	+36° 26'	45°	E	11.6
08-01	11h33.4m	+34° 48'	41°	E	11.8
08-06	11h33.2m	+33° 20'	37°	E	12.0
08-11	11h33.4m	+32° 00'	34°	E	12.2

Periodic Comet Shoemaker-Levy 9 (1993e)					
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	14h08.6m	-12° 36'	125°	E	13.7
06-25	14h08.6m	-12° 32'	121°	E	13.7
06-28	14h08.7m	-12° 29'	118°	E	13.7
07-01	14h08.9m	-12° 27'	115°	E	13.7
07-04	14h09.2m	-12° 25'	113°	E	13.7
07-07	14h09.7m	-12° 24'	110°	E	13.7
07-10	14h10.2m	-12° 23'	107°	E	13.7
07-13	14h11.0m	-12° 22'	104°	E	13.7
07-16	14h11.8m	-12° 21'	102°	E	13.7

This nucleus (P) will collide with Jupiter on July 20.64 UT.

Periodic	Comet	Tempel		1	
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	13h22.5m	-05° 31'	111°	E	8.9
06-27	13h30.0m	-07° 32'	108°	E	8.9
07-02	13h38.4m	-09° 33'	106°	E	9.0
07-07	13h47.6m	-11° 33'	104°	E	9.1
07-12	13h57.5m	-13° 31'	103°	E	9.1
07-17	14h08.1m	-15° 27'	101°	E	9.2
07-22	14h19.3m	-17° 19'	99°	E	9.4
07-27	14h31.2m	-19° 06'	98°	E	9.5
08-01	14h43.6m	-20° 49'	96°	E	9.6
08-06	14h56.6m	-22° 26'	95°	E	9.8
08-11	15h10.5m	-23° 57'	93°	E	9.9

Comet	McNaught-Russell		(1993v)		
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	14h42.4m	+61° 23'	86°	E	11.4
06-27	14h53.1m	+59° 02'	87°	E	11.7
07-02	15h02.8m	+56° 43'	88°	E	11.9
07-07	15h11.7m	+54° 24'	88°	E	11.9
07-12	15h20.1m	+52° 06'	89°	E	11.9
07-17	15h28.1m	+49° 51'	89°	E	12.2
07-22	15h35.7m	+47° 38'	89°	E	12.4
07-27	15h43.2m	+45° 28'	89°	E	12.6
08-01	15h50.5m	+43° 21'	89°	E	12.8
08-06	15h57.7m	+41° 18'	89°	E	13.0
08-11	16h04.7m	+39° 19'	88°	E	13.2

Period	Comet	Borrelly			
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	02h08.8m	-17° 31'	70°	M	13.5
06-27	02h20.5m	-16° 48'	72°	M	13.3
07-02	02h32.2m	-16° 07'	73°	M	13.0
07-07	02h44.1m	-15° 24'	74°	M	12.7
07-12	02h56.1m	-14° 40'	75°	M	12.5
07-17	03h08.2m	-13° 57'	76°	M	12.2
07-22	03h20.3m	-13° 13'	78°	M	11.9
07-27	03h32.6m	-12° 30'	79°	M	11.6
08-01	03h45.0m	-11° 44'	80°	M	11.4
08-06	03h57.4m	-10° 58'	81°	M	11.1
08-11	04h09.9m	-10° 11'	82°	M	10.8

Comet	Takamizawa		(1993i)		
Date	RA-2000-Dec	Elong	Sky	Mag	
06-22	12h41.8m	-12° 56'	104°	M	10.4
06-27	12h28.4m	-13° 18'	97°	M	10.8
07-02	12h17.7m	-13° 40'	90°	M	11.0
07-07	12h09.1m	-14° 03'	83°	M	11.2
07-12	12h02.2m	-14° 26'	77°	M	11.3
07-17	11h56.7m	-14° 51'	72°	M	11.5
07-22	11h52.4m	-15° 18'	66°	M	11.6
07-27	11h49.0m	-15° 46'	61°	M	11.7
08-01	11h46.4m	-16° 15'	57°	M	11.8
08-06	11h44.4m	-16° 46'	52°	M	12.0
08-11	11h42.9m	-17° 19'	48°	M	12.1

better, I couldn't even find M31 without their help.

A.J.'s emerging. Give him my sheet. Kind of don't want to let go of it. Wave of satisfaction runs over me. I guess I knew I'd "finish"...oh, I know what that means: it means I'm still standing. Did I really "finish"? (Hmmm, go for 110 next year!?!?). Still surprises me that I made it as far as I did. I wouldn't have bet earlier that I'd be doing this. Man am I ever beat. Yet, all in all, *I'm glad I considered it.*

Thanks to the organizers who put this Marathon together...I say a silent thanks for the good night that'll always remain as one very satisfying memory.

## Newsletter Deadline

Mail items at least two weeks before the end of the month. Items arriving too late for an issue will be included in the next newsletter.

# The Upcoming Collision of Periodic Comet Shoemaker-Levy 9 with Jupiter

by Don Machholz

For five days in July, fragments of a comet discovered in March 1993 will collide with the planet Jupiter. It is not the first time that a comet has hit another Solar System object, but it is the first time that such a meeting has been predicted and then observed.

The comet was probably very normal until it passed about 16,000 miles from the cloud tops of Jupiter on July 7, 1992. This placed it in orbit around Jupiter, it also fragmented it into several pieces. At discovery nine months later, it appeared as a "string of pearls". Even now, the comet is continuing to evolve, some of the pieces have further divided, others have disappeared.

It is presently unknown what effect these fragments will have on the planet Jupiter. They will hit the planet, which is ten times larger than Earth, at 37 miles per second. But the pieces are rather small, no larger than 3 miles in diameter and may be similar to lightly-packed snowballs.

Jupiter will be situated high in the south at evening twilight, setting around midnight local time. Observers are encouraged to watch Jupiter, even during daylight, at the times of collision and for the hours afterwards. The comet will approach from the south, and hit Jupiter at about -44 degrees south latitude (for comparison the Red Spot is at -20 degrees). The impact points will not be visible from Earth, they will be just beyond the rising edge. Matters are complicated by our own moon, which will be in First Quarter phase and three degrees south of the planet when this all begins. It will move away from Jupiter, but brighten, during these days.

Below are the collision times for the comet fragments. They are current as of June 8. The times listed here are accurate to within about 20 minutes. Next month I'll mail out the latest predicted times, editors should receive them by July 12, perhaps too late for wide spread distribution.

Nucleus Number	Identity Letter	Collision Time		Collision Position on Meridian (M.S.T.)
		Universal Time	M.S.T.	
21	A	July 16.83 19:55	July 16 12:55	July 16 15:48
20	B	July 17.13 03:07	July 16 20:07	July 16 22:59
19	C	July 17.29 06:58	July 16 23:58	July 17 02:50
18	D	July 17.47 11:17	July 17 04:17	July 17 07:08
17	E	July 17.65 15:36	July 17 08:36	July 17 11:28
16	F	July 18.03 00:43	July 17 17:43	July 17 20:36
15	G	July 18.33 07:55	July 18 00:55	July 18 03:45
14	H	July 18.82 19:41	July 18 12:41	July 18 15:31
12	K	July 19.44 10:34	July 19 03:34	July 19 06:22
11	L	July 19.94 22:34	July 19 15:34	July 19 18:22
9	N	July 20.43 10:19	July 20 03:19	July 20 06:09
8	P	July 20.64 15:22	July 20 08:22	July 20 11:12
7	Q	July 20.84 20:10	July 20 13:10	July 20 15:58
6	R	July 21.25 06:00	July 20 23:00	July 21 01:45
5	S	July 21.66 15:50	July 21 08:50	July 21 11:35
4	T	July 21.76 18:14	July 22 11:14	July 21 13:58
2	V	July 22.17 04:05	July 22 21:05	July 21 23:48
1	W	July 22.36 08:38	July 22 01:38	July 22 04:20

# What's Up

## by Steve Coe

July 1994

Sagittarius

Sagittarius is one of the constellations that shows a very different aspect depending on how clear or light polluted the sky is at your observing site. From within the city of Phoenix, only the bright stars of the "Teapot" can be picked out and then only if the sky is transparent. At a site that I generally rate either 5/10 or 6/10 for contrast, the "Teapot" asterism is obvious and the brighter parts of the Milky Way stand out well. This type of site would be Buckeye or Dugas Road. However, driving two hours away from Phoenix to a truly dark and transparent site will transform the constellation of Sagittarius into an amazing light show. The Milky Way glows like a beacon and bright spots within our galaxy show off dozens of star clusters and gas clouds all shouting "look at ME!"

M 24 is the Small Sagittarius Star Cloud. M 24 has been mistaken for the small cluster NGC 6603 for many years. Actually, the entire Star Cloud is M 24. This is made obvious by Messier's notes. This huge star cluster is given the designation Mel 197 in a star cluster catalog by Melotte which was compiled in the 1950's. Many good views of M 24 can be had with binoculars. My best view was with a 6" f/5 and a 24mm eyepiece. It is extremely bright, extremely large, elongated 2X1 in PA 45 degrees, very rich and very compressed. The dense starfield sparkles and shimmers, several dark lanes and patches stand out from the gathering of stars.

B 92 is one of the dark nebula cataloged by E.E. Barnard at the turn of the century (I'll only be able to say that for another five years, so better get it in now.) B 92 is a large, prominent dark nebula on the NW edge of the Small Sagittarius Star Cloud. It can easily be seen in 10X50 binoculars. Using A.J. Crayon's 8" at 60X, I can see several faint stars within the dark patch. Seeing an obviously dark area so distinctly superimposed on top of a rich field of stars is amazing to me.

M 17 is a very bright, large, irregularly elongated nebula at 100X. This nebula has received a variety of names over the years. The Swan section is the brightest and most obvious section on the south side. Adding the UHC filter brings out a dimmer portion of the nebula to the northeast. The addition of this faint part makes the entire nebula take on the shape of a horseshoe. Putting in the UHC also shows off the fact that thin dark lanes cut across the bright nebula in several places, the filter raises the contrast between the bright and dark areas. M 17 is one of my favorites, there are lots of detail to see at a variety of power and filter combinations. It is just seen naked eye on a good night and the finder or a pair of binoculars will show the nebula afloat in a rich Milky Way field.

Sagittarius is obviously a FULL area of the sky and you can spend a lot of summers observing deep sky goodies in the region. I know that it is somewhat daunting to try and get started on an area that contains so much, but it is certainly worth it. Much like the Virgo Galaxy Cluster, just stick to it and you will see that you CAN find your way around in crowded parts of the sky.

# Wanted: New Treasurer

The Saguaro Astronomy Club needs someone to fill the vacancy created by the leaving of Carol Lee. Although Carol has done an excellent job as Treasurer over the past 18 months, it is not expected that the new applicant do as well (at least immediately).

Carol and Time Lee are leaving for a new job in San Jose and the June meeting will be their last. We will all miss them and their efforts they both put into SAC.

Anyone interested in taking the position of SAC Treasurer, contact Bob Gardner either by phone or at a meeting or star party.

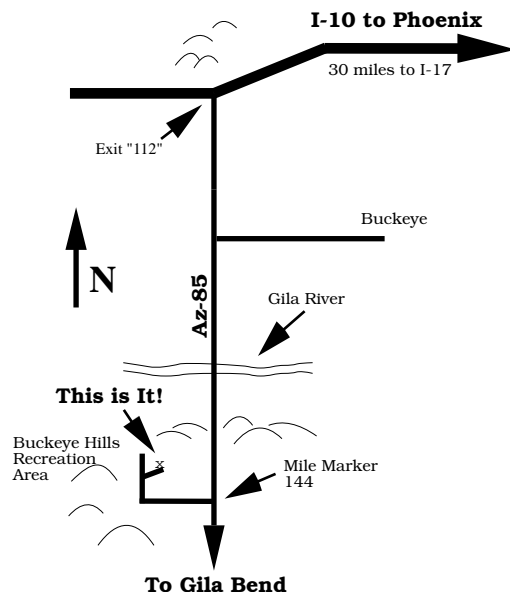
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## Directions to SAC Events

**SAC General Meetings** 7:30 PM at Grand Canyon University, Fleming Building, Room 105 — 1 mile west of Interstate 17 on Camelback Rd., north on 33rd Ave., second building on the right.

**SAC Star Parties** at Buckeye Hills Recreation Area Interstate 10 west to Exit 112 (30 miles west of Interstate 17), then south for 10.5 miles, right at entrance to recreation area, one-half mile, on the right. No water and only pit toilets. Please arrive before sunset; allow one hour from central Phoenix.

**SAC Deep Sky Subgroup Meeting** at John & Tom McGrath's, 11239 N. 75th St., Scottsdale, 998-4661 — Scottsdale Rd. north, Cholla St. east to 75th St., southeast corner.



# Bits and Pieces

## Coming Events

### Star Parties

Shoemaker-Levy 9 Jul. 16-22  
Perseids Aug. 12  
All-Arizona Oct. 7 & 8

## June SAC Meeting

There will be no main speaker for the June meeting. Instead the meeting will be a time for members to show the club what they've been up to. If you want to make a short presentation, sign up just prior to the start of the meeting. Please try to keep your presentations within 20 minutes.

## Deep Sky Meeting

The Deep Sky Group is made up of people that like to observe celestial bodies out past the far reaches of our Solar System. These bodies include stars, nebula and galaxies. If you are interested in sharing your observations, or knowing what they look like in telescopes — then by all means come join us at the next meeting. The meeting will be held at John McGrath's house; directions are here in the newsletter.

The next group of objects to discuss from the 110 Best NGC List will be 14 objects in the constellations Aquila, Draco, Hercules, Ophiuchus, Scutum, Sagittarius and Vulpecula. Eventually we will eventually discuss the entire 110 Deep Sky objects in the list.

The following summer constellations are to be discussed:

Aquila, 6781; Draco, 5907, 6503, 6543; Hercules, 6207, 6210; Ophiuchus, 6369, 6572, 6633; Scutum, 6712; Sagittarius, 6445, 6520, 6818 and Vulpecula, 6940.

You don't need to RSVP, we don't extend special invitations to anyone — ourselves included. If you are interested show up, we'd love to have you.

The Deep Sky meeting will take place on Thursday, July 28 at 7:30pm.

## Minutes of the May Meeting

President Bob Gardner opened the meeting at 7:30pm. The first announcement was that there were two speakers on archaeo-astronomy, consequently there would be no Show-and-Tell or eclipse photos. They would have to wait until the next meeting. Announcements would be kept brief and to the point. He then asked for visitors to stand and identify themselves. Several do so.

Due to the treasurer's absence there was no treasurer's report.

A.J. Crayon announced the next Deep Sky Group Meeting, June 2, and that the list of objects to be discussed were in the May and June Newsletters.

Rich Walker, Public Events Director, gave quite a list of public and private Star Parties. The largest being the annual Thunderbird Park meet at which there were 23 scopes and several hundred people. This event was also listed in a Chinese/English newspaper, in Chinese and English! Nice job. Rich is working on a star party in Payson for June 18th.

Susan Morse introduced the first speaker Ben Mixon whose avocation is archeology. His topic was the hole in the rock at Papago Park and its interesting relation to astronomy. It is astonishing how these prehistoric astronomers of more than a 1000 years ago understood the motions of the Sun and Moon. And without the help of the NGC, a telescope or computers!

The second speaker, Dr. David Jacobs an archaeologist from ASU, discussed several prehistoric digs for the Bureau of Land Management around the Lake Roosevelt area. He showed several slides and discussed the symbolism behind the pre-historic thought process. Some of the slides were still a puzzle to him and his colleagues. One in particular had walls that converged at an angle of 6 degrees. It is thought to have astronomical implications but so far they are drawing blanks (cloudy skies?). The question was put to those in attendance for an answer. So far none have been proposed.

—A.J. Crayon, SAC Secretary

## Such-A-Deal

**SUCH-A-DEAL** is a place to advertise equipment, supplies, and services related to amateur astronomy. This is a free service for SAC members and friends. SAC is not responsible for the quality of advertised items or services.

**For Sale**—8" Celestron Power Star PEC (Star Bright Coatings), like new. 8x50 removable polar axis finder Scope, Dec motor, dew cap, nylon cover, camera mount, user manual, dual-balance system, new drive computer, 1.25" star diagonal, other extras. Asking \$1100 or best price. Call Jim 554-8789 8-5PM.

**For Sale**—Tele Vue 4.8 Nagler, never used, 82°. Asking \$115 or best price. Call Jim 554-8789. 8-5PM.

# Star Party Etiquette

These rules are intended to help maintain access and use of the Saguaro Astronomy Club observing site for as many members and their guests as possible, while preserving the conditions that have brought us out to enjoy the sky. Following these rules will permit everyone to pursue the study and enjoyment of astronomy to the fullest satisfaction.

If you are new to the Club, or it has been a while since you have been to a part party, please take a few minutes to review these basic rules. **Please don't hesitate to ask questions** if anything is unclear.

1. **Do Not Litter!** Everyone shall be responsible for their litter. If you bring it in, take it with you when you leave. Access to the observing site depends upon each member complying with this rule.
2. **No Open Fires Permitted.**
3. **Consumption of Alcoholic Beverages is Prohibited.**
4. **No White Lights after Dark!** Use dim red lights after sundown. Use only the minimum light necessary for safety. If you **must** use lights, please **ask first**, to avoid spoiling someone's night vision or astrophoto. Shield or turn off automatic car door or trunk lights (Pull the fuses if necessary.)
5. **Park Based on your Observing Plan.** Park facing towards the exit, to avoid having to backup using backup lights. If you planning to leave early, park close to the exit. If you do not bring a telescope, park away from observers and walk over. Five MPH is the maximum speed while on observing field to keep dust to a minimum.
6. **Plan Your Departure.** Normal departure times are scheduled hourly after 10 PM. (Astrophotographers please note!) During the winter, departure times usually start an hour earlier. **Use Parking Lights Only — No Headlights, Please!** If leaving at other times, **Please announce in advance** (to save night vision and astrophotographer's tempers), and have someone lead your vehicle out with a flashlight.
7. **Members are Responsible for their Guests.** All non-members are considered "Invited Guests," and must observe the rules.
8. **Bring Observers Only.** Small children and pets generally do not enjoy star parties, and can be annoying to others. Please leave them at home if possible.
9. **Keep Noise to a Minimum.** Please, no loud radios, tape players, CB, CDs, horns, yelling, etc.
10. **Never be the Next to the Last to Leave.** Don't leave someone alone at the observing site. Dead car batteries, vandals...

The above rules are general guidelines. All SAC members and their guests should be considerate and conscious of other members' feelings and conduct themselves accordingly.

Each person must help protect the Club's continuing privilege of access to the observing site by acting in an orderly and responsible manner at all times, by obeying these rules and all other applicable City, County, State, and Forest Service rules and regulations.

# July 1994

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
All Times are Mountain Standard Time				On July 16, 1969, Apollo 11 was launched		<b>TAAA Meeting</b> 1	<b>SAC Star Party</b> Buckeye Hills (members&guests) 2
3	4	5	6	7 Mercury 1.3°S of Moon A.M.	8 New Moon 2:37 P.M.	9	
Comet Shoemaker-Levy 9 Impacts with Jupiter July 16-22			13	14 Neptune at Opposition	15 First Quarter Moon 6:12 P.M.	16 Uranus at Opposition Jupiter 3°N of Moon	
17 Mercury at greatest elongation W (21°)	18 Mars 5°N of Aldebaran	19	20 <b>EVAC Meeting</b> Man on the Moon 1969	21	22 Full Moon 1:16 P.M. <b>SAC Meeting</b>	23	
24/31	25	26	27	28 <b>SAC Deep Sky Meeting</b>	29	30 Last Quarter Moon 5:40 A.M.	

## Magazines & Discounts

Club members may subscribe to astronomical magazines at reduced rates through the club Treasurer. See the Member Services Form on the back page of this newsletter. Furthermore, club members are encouraged to align their subscriptions with the Jan.-Dec. calendar year. This eases the burden both on the Treasurer and the Publisher by permitting a single Group Renewal to be placed in the autumn for the upcoming calendar year.

Those members who experience problems with their subscriptions to *Astronomy* magazine may call Kalmbach Publishing Customer Service at (800) 446-5489.

Those members who experience problems with their subscriptions to *Sky & Telescope* magazine may call Sky

Publishing at (800) 253-0245.

Besides the club discount on *Sky & Telescope* magazine, Sky Publishing offers club members a 10% discount on all other Sky publications. This means books, star atlases, observing aids, Spotlight prints, videos, globes, computer software, and more.

Club members who subscribe to *Sky & Telescope* through the Club Discount Plan may order Sky publications directly, at the above toll-free number, without going through the club Treasurer. Simply mention the Club Discount Plan and give the Saguaro Astronomy Club name to receive the discount. Sky Publishing will check their records to verify that you are eligible to receive the discount.

## Saguaro Astronomy Club Member Services Form

### Membership

Memberships are for the calendar year and are pro-rated as follows: Jan - Mar 100%, Apr - Jun 75%, Jul - Sep 50%, Oct - Dec 25%.

- \$20.....Individual Membership
- \$30.....Family Membership (one newsletter)
- \$100.....Business Membership (includes advertising)
- \$4.....Nametag for members
- \$10.....Newsletter Only

### Subscriptions

The following magazines are available to members. Subscribe or renew by paying the club treasurer. You will receive the discounted club rate only by allowing the treasurer to renew your subscription.

Sky & Telescope.....\$20.00 for one year

Astronomy.....\$18.00 for one year

Write your name, address, and phone number in the space below.

Make checks payable to SAC.  
Mail the completed form to:

Carol Lee  
SAC Treasurer  
3314 N 68th Street, #205-W  
Scottsdale AZ 85251



### **SACNEWS**

c/o Paul Dickson  
7714 N 36th Avenue  
Phoenix AZ 85051

Stamp

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