Saguaro Astronomy Club

SACnews

Volume 30 Issue 8 August 2006

SAC Officers

President: Rick Tejera
623-572-0713
president@saguaroastro.org
Vice President: Paul Lind
602-863-3077
pulind@qwest.net
Treasurer: Paul Dickson
602-841-7044
treasurer@saguaroastro.org

Secretary: Susan Pritchard
623-934-7496
svpritchard@msn.com
Properties: Tom Polakis
tpolakis@cox.net
480-967-1658
Public Events:
Jack Jones
623-322-1559
publicevents@saguaroastro.org
Astro-Imaging Sub Group: Al Stiewing
623-875-3969
Treasurer@saguaroastro.org
SACNEWS Editor:
Rick Tejera, 623-572-0713
saguaroastro@cox.net
ATM Subgroup : Thad Robosson
602-826-0328
atmgroup@saguaroastro.org

Inside This Issue

The Bottom of the Bag

By Rick Tejera

OK I'll admit it; I'm a pack rat. I admit this only because it's hard to deny, looking at my garage. I seem to manage to collect things from just about everything I do. Somehow, throwing something out seems a waste to me, so I keep it. Knowing this and with the recent Spate of crappy observing weather, I decided to go through my Astro bag and see what I've amassed and what I can do without. (Not that I'd throw it away, mind you, just take it out of the bag).

First thing was go through the books in there. My anthology consisted of the following: My Observing Binder, Sky Atlas 2000, Deluxe Edition, The Year Round Messier Marathon handbook, Peterson Field Guide to the Stars & Planets, Bothe editions of Kepple & Sanner's Night Sky Observer Guides and the Sky Atlas Companion. Of these, the observing Binder is untouchable, it's where I keep my observing lists printouts & drawing sheets etc. It's a 2" loose leaf binder, so it does take up a bit of space, but it stays. I've grown use to using the Sky Atlas and along with the Sky Atlas Companion, I find the pair to be quite helpful in knowing where to look and what to expect when I get there. The descriptions in Sky Atlas Companion are brief, but give a good overview of what the object will look like in the eyepiece. They stay. Hmm. So far this isn't what I planned. Next, The year round Messier Marathon Guide. Well now, here' a likely candidate to retire to the bookshelf, don't really need it to find the Messiers anymore, so out it goes. Petersons Field Guide goes with it, to be returned only for public events. The Charts, in Petersons, while detailed are pretty small, and the old peepers just don't see white on black at night very well anymore. There's lots'o good info on stars, planets etc in there though, the kid of stuff that gets asked at Public Star parties, thus its temporary visa into the bag. Both editions of Kepple & Sanner? Hello, Rick, They're arranged by season, so at any given date you only need one, DUH! OK, so the main compartment in the bag has been reduced by three books and about 1 pound.

What next? The Sketching kit. Well

(Continued on page 3)

NASA Space Place

Celebrating 40 Years of Intent Listening

By Diane K. Fisher

In nature, adjacent animals on the food chain tend to evolve together. As coyotes get sneakier, rabbits get bigger ears. Hearing impaired rabbits die young. Clumsy coyotes starve. So each species pushes the other to "improve."

The technologies pushing robotic space exploration have been like that. Improvements in the supporting communications and data processing infrastructure on the ground (the "ears" of the scientists) have allowed spacecraft to go farther, be smaller and smarter, and send increasingly faint signals back to Earth—and with a fire hose instead of a squirt gun.

For over 40 years, the "Mars" 70-m Deep Space Network antenna at Goldstone, California, has vigilantly listened for tiny signals from spacecraft that are billions of miles away.

Since 1960, improvements in NASA's Deep Space Network (DSN) of radio wave antennas have made possible the improvements and advances in the robotic spacecraft they support.

"In 1964, when Mariner IV flew past Mars and took a few photographs, the limitation of the communication link meant that it took eight hours to return to Earth a single photograph from the Red Planet. By 1989, when Voyager observed Neptune, the DSN capability had increased so much that almost real-time video could be received from the much more distant Planet, Neptune," writes William H. Pickering, Director of JPL from 1954 to 1976, in his Foreword to the book, *Uplink-Downlink: A History of the Deep Space Network, 1957-1997*, by Douglas J. Mudgway.

Mudgway, an engineer from Australia, was involved in the planning and construction of the first 64-m DSN antenna, which began operating in the Mojave Desert in Goldstone, California, in 1966. This antenna, dubbed "Mars," was so successful from the start, that identical 64-m antennas were constructed at the other two DSN complexes in Canberra, Australia, and Madrid, Spain.

As Mudgway noted in remarks made during the recent observance of the Mars antenna's 40 years of service, "In no time at all, the flight projects were competing with radio astronomy, radio science, radar astronomy, SETI [Search for Extra-terrestrial Intelligence], geodynamics, and VLBI [Very Long Baseline Interferometry] for time on the antenna . . . It was like a scientific gold rush."

In 1986 began an ambitious upgrade program to improve the antenna's performance even further. Engineering studies had shown that if the antenna's diameter were increased to 70 m and other improvements were made, the antenna's performance could be improved by a factor of 1.6. Thus it was that all three 64-m DSN antennas around the world became 70-m antennas. Improvements have continued throughout the years.

"This antenna has played a key role in almost every United States planetary mission since 1966 and quite a few international space missions as well. Together with its twins in Spain and Australia, it has been a key element in asserting America's pre-eminence in the scientific exploration of the solar system," remarks Mudgway.

Find out more about the DSN and the history of the Mars antenna at http://deepspace.jpl.nasa.gov/dsn/features/40years.html. Kids (and grownups) can learn how pictures are sent through space at http://spaceplace.nasa.gov/en/kids/phonedrmarc/2003_august.shtml .

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

(Continued from page 1)

that's one of those folio cases with a clipboard attachment on the front. It conveniently holds my pencils & blending stumps & such and fits over the books so it's gotta stay. Let's see what's in the side compartment, shall we? Travel Alarm, I like to have a clock at hand, but the problem is the screen is a blue backlight, off to the camping section with it, to be replaced by a red LED alarm clock that'll run off the inverter. Even swap there. Here's something I haven't used in a while, a small cassette recorder. Before I started to actively sketch my observations, I'd sit at the eyepiece and dictate my impression into the recorder. Also had one tape that I used as a timer to tell me when to turn the knob on my barn door tracker. Well, the barn door tracker has been retired and I haven't dictated in a while so I suppose I can part with this. Next thing in there is a small portable radio. This stays, for its size, I get pretty good reception at places like Arizona City, Sentinel. Nice to have something to listen to every now and again.

Several Red Flashlights, Well, you know that story, they stay. Hold on there, what this all the way at the bottom? An Epi-Pen, OK nothing to do with Astronomy, A hold over from after my big asthma attack 6 years ago. It's basically a syringe of epinephrine to be use in case of respiratory arrest. Long since expired and since the asthma is under control not needed. Out it goes.

Next side compartment: Small Carpenters level. This is used to level Polly before alignment. Should really be in the tool box but somehow it keeps ending up here, don't ask how, I couldn't tell you. We'll just put it aside to go back to the tool box. While I'm at it we'll do the same for the vise-grip pliers that have the same toolbox aversion. The small jeweler's screwdrivers will stay here though. I've got a second set in the tool box, but find having this set near at hand convenient for ad-hoc repairs.

OK now to the front pouch. Green Laser, Stays. 25 AA batteries. Hmm, wonder if they're any good? After testing, found that 9 were good, the rest are the flotsam of telescope use and find they're way here to avoid littering our observing sites (Aren't you proud of me?). I think I'll look at some sort of small container for batteries. Next, a few pencils & Pens and some odd scraps of paper that probably held some meaning when they were written, but now may as well be Klingon writing, Oh wait, one of them is a translation into Klingon of the phrase "Revenge is a dish best served cold"("bortaS bIr jablu'DI', reH QaQqu' nay'). Why, I don't know I must've thought that was cool at the time.

OK, this concludes our tour through Rick's Astro bag. What have I found out about myself that I didn't already know? I think that in addition to being a pack rat, I have an affinity for gadgets. Lots of little things that I could do without, but have a certain "comfort level' that I'm not willing to give up. I know more than few of will wonder why I think I need half of this stuff, and honestly I wonder the same thing. It's not a case of need as much a case of want. Since I really don't have to carry it that far (from the car to the observing table), It's not much of a burden. I'd be interested in seeing what stuff other folks have that they didn't know that had or needed (or thought they needed) and also how much stuff they can rid themselves of. I was actually surprised on few things I found, that I didn't know where in there. This tells me that most of the stuff has at least some minimal purpose, so I guess I'll just hang onto it until next monsoon, when I again venture to "The Bottom of the Bag".

Call For Observations– Scorpius

By A.J. Crayon

Scorpius is one of those types of asterisms that appears the same in different cultures that had no contact what so ever, i.e. ancient Egyptians and pre-Columbian. Unfortunately our weather, for the months during which the following deep sky objects could have been observed, did not cooperate. However a few folks got a chance to get out for an observation or two. Several more submitted observations from 2 or 3 years back. Thanks to all for your support!

M80

8" f6, Newtonian, 38X; Charlie Whiting: At **38X** this GC is clearly visible as a possibly cometary object. It is no wonder Charles Messier wanted to catalog it. It is round extended and nebulous. There's a neat diamond shaped asterism of stars to the SSW. More close by, to the NE is an 8.5 mag star. At **60X**, it looks more like a GC now. It is brighter towards the middle. No stars resolved, yet. At **160X** one 11.7 mag star is resolved midway between the core and the 8.5 mag star. At **240X**, the core appears off-center, lying to the NW. SkyMap shows a 13.2 mag star at this location; so, maybe, it's an optical illusion that the core is off-center. I did not resolve the 13.2 mag star and that might be because it is embedded in dense halo. Went all the way up to **400X** trying to resolve more stars, but with little luck. There were maybe 1 or 2 tiny grains of light that popped into view for a fleeting second. It was impossible to say where they were, except that they were in the halo. From this location, this is a fairly low altitude object, even when it is nearly on the meridian, as it is now. It is bright, but it is not willing to give up its secrets easily. One more try with the 7.5mm Ultrascopic eyepiece and 2X Barlow (**320X**). At last, the halo at least looks grainy. And it looks to be 4 or 5 times as large as the core.

11" f8, SCT, 22mm; Steve Coe: bright, large, round, much, much brighter middle, 11 stars resolved in outer section, averted vision makes it much larger. In the 14mm, 22 stars resolved with direct vision, averted vision makes this cluster much larger and resolves about 40 stars, but they are difficult to hold steady.

14" f11, SCT; 195X; Joe Goss: Globular Cluster-Large, bright, much brighter in center, well resolved on outer areas.

14.5" f5.2, Dobsonian, 440X; AJ Crayon: Estimate 7th mag and 5'. Very large, very bright with a 2' very much brighter middle. Many stars resolved across the face with 20 halo stars seen. There's a 9th mag star 3' to the northeast.

M4

8" f6, Newtonian, 38X; Charlie Whiting: I was expecting to see this GC in the finder scope, but did not. It was barely visible. It was hard to tell its size or its shape. At **60X**, it was slightly more visible, but still not revealing its size or shape. At **160X**, its size is now detectable. It fills more than 1/2 the FOV. [This would mean that it was 10-15' in size, but in reality, it is over 22'.] Its shape is tougher to answer. There's 15-20 stars of 10th to 12th mag resolved, scattered all over. If there's a core, it is not bright and round. The middle seems concentrated in a line that runs a little E of N-S. Several of the resolved stars follow this concentration. Zooming in on the area of concentration, at **320X**, strengthens the impression that it is real. The core seems to be broken up into pieces. At this level this cluster looks more like an OC than a GC. The light pollution of the urban sky and its low altitude has really taken the punch out of this object. I remember looking at it with binoculars from a dark site. There it was an impressive object. Here, with the same binoculars, it is invisible.

11" f8, SCT, 14mm; Steve Coe: very bright, very large, much brighter middle, 44 stars resolved, the chain in the middle is obvious, there are 2 light orange members. This is a nice view of a favorite object.

14" f11, SCT; 150X; Joe Goss: Globular Cluster-Very large, very bright, much brighter in the center, very well resolved in outer areas, many arc's and chains of stars.

18" f4.5, Dobsonian, 135X; Dan Gruber: elongated bright core with about 6 mag 10 stars in a line parallel to the major axis of the core. Scattered additional mag 10 stars, some in concentric rings/ arcs generally parallel to the central bar.

(Continued on page 5)

(Continued from page 4)

NGC6153

10" f10, SCT; 178X; Joe Goss: Planetary Nebula- Fairly small, fairly bright, round, blue/gray color.

14.5" f5.2, Dobsonian, 60X; AJ Crayon: not stellar. This planetary, almost on the central meridian and just less than 20 deg above the horizon, took **220X** and **440X**, with UHC, with no trouble ... oh please don't stop! It is almost framed by three stars of 9, 10 and 11th mag forming an obtuse triangle with the 10th mag star being yellow. For the planetary it is pretty large, pretty bright, a little elongated and has a dark middle - like a small Ring Nebula. With averted vision it has a very dark middle surrounded by a pretty bright circular torus. There are small bright spots on the east and west sides. In moments of good seeing the bright spots appear a little elongated. Estimate the size 20" and magnitude at 11th.

NGC6231

Naked Eye, Rick Rotramel: OC - Yes I can see it naked eye. It looks like a comet head (coma) with a tail extending from it. Hence it's name, "The False Comet".

7X50mm Binoculars; Charlie Whiting: Very seldom do I see a clear sky during the summer in Venice FL, and that is why I do not bring a telescope with me. But, tonight was an exception; it was clear! I was unable to spot this OC naked eye. Just south of NGC 6231 ζ Sco (3.62m) was just at the threshold of naked eye visibility. But there was a beautiful site in the binoculars. ζ consists of 4th, 5th and 6th mag stars forming a triangle. The first two are stunningly brilliant. The glow of the OC is unmistakable, and is highlighted by a bright beacon NW of center. I got the impression of an arrowhead shape. The OC was so bright that I tried again to see it naked eye (but didn't). Some of its stars were on the verge of being resolved. Just north of NGC6231 is a large and sparse OC, Cr-316. Its group of stars forms a distinct pentagon. Further north but still in the same FOV is μ1 and μ 2 Sco, a brilliant double. To the ESE is η Sco, another sparkler. What a fabulous field this was!

10" f10, SCT; 125X; Joe Goss: Open Cluster- Very large, very bright, rich in bright stars, letter "V" of faint stars stand out, well defined.

M6

Naked Eye, Rick Rotramel: OC - Yes, I can see it naked eye in a dark sky.

6" f7, Newtonian, 60X, Steve Coe: Very, very bright, very large, pretty rich, and somewhat compressed. This cluster is easily naked eye and several of the brighter members can be seen in **10X50** binoculars. The shape has caused observers to see a butterfly in this cluster and I agree with that evaluation. There are even two delicate curved chains of stars that form "antennae". BM SCO is a variable star on the east side; it is a nice orange color.

8" f6, Newtonian, 38X; Charlie Whiting: This is a sparkler of a cluster! It is apparent why this OC is called the Butterfly Cluster. Bright stars seem to form a lazy figure '8' with an added line perpendicular through the intersection of the lobes. It doesn't take much imagination to see the lobes as butterfly wings and the line as its body. About 18 stars (7th and 8th mag) participate in this illusion. The axis of the figure runs NE-SW and the line run NW-SE. There is a very bright yellow star in the NE quadrant. There are also some dimmer stars scattered around. At **60X** the cluster fills more than 1/2 of the FOV. The diameter of the cluster is about 20'. 30-40 dimmer stars can now be seen in addition to the brighter layer of 20-25 stars. At **120X** I am viewing close to the limit of focused seeing for this low altitude object. Most of the brightest stars appear blue-white. The yellow star is BM Scorpii, a variable of 6.8-8.7 mags. It was definitely the brightest star in the cluster, brighter than the 7th mag stars.

10" f10, SCT; 45X; Joe Goss: Open Cluster- Very large, larger than FOV, very bright, very loose, one reddish orange star stands out, well resolved, not well defined.

18" f4.5, Dobsonian, 135X; Dan Gruber: 2 parallel rows of stars consisting of 18 – 20 mag 8 to 10 stars. End star of one row is distinctly red-orange. These rows appear "balanced on a fulcrum", an inverted V – shaped asterism with its "point" closer to the parallel rows. The asterism consists of 7 mag 10 – 11 stars almost touching the row with the red-orange star and off-center away from it.

M7

Naked Eye, Rick Rotramel: OC - Yes, I can see it

(Continued on page 8)

President's Message

By Rick Tejera

Big Sigh…..so far, this summer, Meteora's been winning. I hope you've been able to fill the time NOT observing with astronomy related tasks that don't require clear skies. I've cleaned out my Astro bag and gone through things, tossed out stuff and acquired stuff and fixed stuff. Hopefully I'll get to USE stuff later this month and next.

The first opportunity is Aug 19th, the Annual "To Heck With The Monsoons Star Party" at Cherry II. This year Steve Coe Will host a novice group session before dark, so If you've been wanting to ask questions get help in using your equipment or learn a bit more about getting the most out of it., plan on attending. Sunset is 1911, so plan on being there about 1 hour prior. Cherry II is about 1 hour north of Phoenix, so plan accordingly. A map to the site appears on page 10 of this issue.

Well, the Coconino Forest is open again and Steve has re-scheduled the 5 Mile Meadow Star Party for Sept 22nd & 23rd. A word of warning, it's gonna get COLD, so be prepared. Steve is planning to give a demonstration on staying warm at the September meeting, so if you've never been out in the cold, you may want to join us in September.

Mark your calendars for October 28th. We'll be hosting the Fall edition of the Thunderbird Starwatch at Thunderbird park in Glendale. This event keep growing in popularity, so the more folks with scopes, the better the event. We always have an appreciative & curious crowd, which make this our most enjoyable public event. Come out and show off the sky you love so much!

Any orginization such as ours strength's come from it members. I've always been proud to know that SAC member have always brought a lot to the Amateur Astronomy community. Every now and again, though you lose a piece of the structure of the club and it take a while to fill in the void. As some of you may already know, Long time SAC member and my predecessor, Thad Robosson has moved to new digs in Sierra Vista . While I'm certainly glad for he's moved on to something he's been looking forward to for while, I'm sorry to see him go. Thad has always been an integral part of the club, you could always count on his participation in club business (even before it was his job) and he's always been a active & keen observer. I've said that he's one of those folks who to put it mildly is "Good with his hands". I doubt there's anything out there he can't fix or improve on (including a stick, inside joke). He formed the ATM group and offered the use of his, as he put it, killer tools. A lot of projects were begun and completed during those meetings. I know he helped me improve Gert immeasurably over the years. I'll certainly miss his able help, but more so I'll miss his friendship. Over the years Thad & I found we had more common interests than just astronomy. I introduced him to geocaching and together we hid & found many hidden treasures. It's just not going to be the same without him around. Hopefully We'll manage to make the time to visit. I know all of you join me thanking him for his service to the club and wish him well in Sierra Vista.

Monthly Trivia Question

What is the most distant object visible to the naked eye?

Last Month's Answer: What was the last February NOT to have a full Moon? When will the next one be?

The last February Not to have a full Moon was 1999. The next occurance will be 2037. The Cycle runs between 37 & 38 years Depending on leap years.

September 2006

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Schedule of Events for September 2006

Sept. 7th	Moon is full at 1142mst
Sept 8th	**SAC General Meeting at Grand Canyon University at 1930, Speaker: Dr. Ted Bowell, Lowell Observatory. Topic: Hunting for Dangerous Earth Approaching Asteroids**
Sept. 14th	Moon at third quarter at 0415 mst.
Sept. 16th	**SAC Star Party at Cherry II, Sunset 1854, End Ast. Twilight 1958 Moonrise 0135.**
Sept. 22nd	Moon is new at 0445 mst.
Sept. 23rd	Autumnal Equinox at 2103
Sept.22nd –23rd	**5 Mile Meadow Star Party at 5 Mile Meadow (DUH!). Rescheduled from June**
Sept. 30th	Moon at first quarter at 0404mst.

Future Planning

Oct. 20th-21st	**All Arizona Star Party at the Farnsworth Ranch. For more information, go to: http://www.eastvalleyastronomy.org/aasp.htm**

(Continued from page 5)

naked eye in a dark sky. M7 appears brighter and larger than nearby M6.

4.25" f4, Newtonian, 16X; Steve Coe: there is enough room around the cluster to frame it in the Milky Way and there are 40 stars resolved with this modest scope.

8" f6, Newtonian, 38X; Charlie Whiting: This OC was easily visible in the **9x50** finder scope as a cluster of about a dozen pin pricks of light. At **38X**, this thing is huge! It overflows this low power eyepiece. It must be almost 1 1/2-degree in diameter. There is a concentration of about 20 stars (5th, 6th and 7th mag) in the center, which form a figure of a distorted letter, "K" or "R". One of these stars appears as pale yellow-white. Several of the brightest stars appear blue-white. The central concentration is about 40' in diameter. I went up one click to **60X** just to take a look. The cluster spreads out. It is sparse. Some dimmer stars are resolved. The yellow star is listed by WDS as SEE 342. It is a very close (0.42") double, too close to separate.

10" f10, SCT; 45X; Joe Goss: Open Cluster- Very large, larger than FOV, very bright, very loose, one reddish orange star stands out, well resolved, not well defined.

Call for Observations

For September - while working on a globular cluster observing program, I did a number of them one night in Sagittarius and was struck by their varied size and magnitudes. So, I thought this would be a nice sequence for all to study and have, therefore, arranged them from the faint to very bright. Keep track of the number of stars you can resolve in each of these gems. The first to start with is magnitude 11.2 **Palomar 8**, at almost 5' that may be found a little more than 2° east-southeast from M25. Second is **NGC6558** and is located in the spout of the teapot. Its magnitude 9.3 and almost 4' should make it easier to spot. Next is **NGC6652** located almost 3° northeast from Kaus Australis, also known as **ε** Sagittarii. This globular is at magnitude 8.9 and is about 3.5' in diameter. Continuing on we go back near one of the earlier one, **NGC6569** in the spout of the teapot, is magnitude 8.7 and almost 6' in diameter. While here, check out NGC6558 again, only one-degree to the west. I missed this alignment during my observing sequence and need to go back and check them out again. The fifth in this sequence is **NGC6624**, at magnitude 8.3 and 6', is located about 50' southeast from Kaus Meridionalis, better known as **δ** Sagittarii. Now move on to **NGC6723** located about 30' north of northeast from **ε** Corona Australis. This one is magnitude 7.3 and 11' in diameter. At this time, let me put a thought in your mind. We have gone from very faint to the very large and you might wonder why this last one isn't in the Messier Catalog? To see why it isn't check out the last globular cluster on this month's list **M22** is pretty easy to find being about 2.5° northeast from Kaus borealis, or **λ** Sagittarii. This one is magnitude 7.3 and 11' in diameter, one of the finest globular clusters. I hope you enjoy the tour and have an appreciation of the variety of these denizens of the deep.

The sly Fox, Vulpecula will command our attention for the month of October. I've been wanting to look at red stars lately, actually anything in the telescope would do, and have discovered **CG Vulpeculae** has a color index of 4.28, which should put it in the color range. It is about 0.5° north of northeast from 1 Vulpeculae. Check it out and let us know your impression. Next is the **Vulpeculae Cluster**, but has other more recognizable names. It may be found 2.7° southeast from CG Vulpeculae. Once there you will immediately recognize its shape. Next is the open cluster **Stock 1**, located about 1.5° northeast of **α** Vulpeculae. Hint, it is pretty rich and bright. Now we move on to the open cluster **NGC6823** and the faint nebulae **NGC6820**. Try filters on the nebula to see if they help. Finally we get to the **Dumbbell Nebula**, need anything more be said about this entry? Now for something a little more difficult than M27, **Roslund 4** a rather small, faint rather rich open cluster located in the bright nebulae **IC4954**. This duo is located about 1° 40' east of northeast from magnitude 15 Vulpeculae. Our final treat is at the eastern end of the constellation, near the border with Pegasus, **NGC7080**. It is 1° east of southeast from 5th magnitude 35 Vulpeculae.

Bits & Pisces– Minutes of the July 14th, 2006 General Meeting

By Susan V. Pritchard

The July 14, 2006 meeting opened at 7:30 by President Rick Tejera, who welcomed all visitors and members. He invited the visitors to introduce themselves and sign the guest book and receive a copy of the SAC newsletter. Paul Dickson gave the Treasurer's Report—the club has a balance of $5,958.66. Most of the recent assets were from T-shirt sales and memberships, which now stand at 99. He said that the major expense was the new projector bulb. He reminded everyone to renew if they haven't already done so.

Announcements: Rick Tejera told the members that he had received information from Ted Dunham (our April speaker), that there had been a re-instatement of the SOFIA program in the 2007 budget. Ted had thanked Rick and all the SAC members who had written support letters in favor of the program's continuation.

Peter Argenziano said that he was planning on attending the Oklahoma Star Party/Conference (Sept 16-24, 2006) at Canton, Oklahoma and had room for co-riders to share the trip. See him at break.

Rick Tejera mentioned that a SAC Board meeting had been held earlier and that he proposed that SAC form an Ad Hoc Committee to propose some commonsense guidelines for laser pointers' use at star parties. He will chair the committee and would like volunteers to see him at break to be added to the committee. Once the guidelines are set, they can be posted on the SAC website—like the Star Party Etiquette.

Steve Coe announced that the last upload for the Star Databases would be available within a week—it now includes 3 sections—Red Stars, Double Stars, and the Big Collection (over 10,000 Nebulae, galaxies, globular clusters, etc…) He said that there are 3 ways to access the database, but we don't have a manager program written specifically for the database at this time. Gene Lucas mentioned that many astronomers from around the country are already using the SAC database and this update will increase its usage.

Upcoming Events:

Next Saturday, July 21, 2006 will be our regular monthly star party at Cherry Road # 2 site.

Steve Coe said that the next Novice Group will be at the Cherry Road site on August 19, and the new meeting date for the 5 Mile Meadow Star Party will be at Happy Jack on Sept. 22-23, 2006.

Jack Jones, as Pubic Events Coordinator, said that the next public star party would be at Reach 11 on Thursday, August 10; Thunderbird Starwatch on Saturday, Oct. 28; and Reach 11 event on Dec. 9 as well.

Steve Dodder said that the next potluck at Stonehaven Observatory is on Saturday, October 14, 2006.

Gene Lucas told the members that he had a Meade CCD camera/telescope for sale.

The next SAC general meeting will be on August 11, 2006 here at Grand Canyon University. The speaker will be Paul Scowen? from ASU—topic—"The Orion MIDEX Star Formation Survey Mission".

Show and Tell:

Al Stiewing showed some slides demonstrating some comparisons in various cameras.

Jack Jones gave a nice presentation of slides from the Grand Canyon Star Party.

After the break, Paul Lind introduced our own Steve Dodder, who gave a presentation on Solar Observations and the modification of needed equipment--like filters.

Respectfully submitted,
Susan V. Pritchard

(Correction: Rick Rotramel pointed out that viseo he showed at the June meeting as reported in the June minutes in last months issue were taken at the Messier Marathon, not the RTMC as originally reported, Ed)

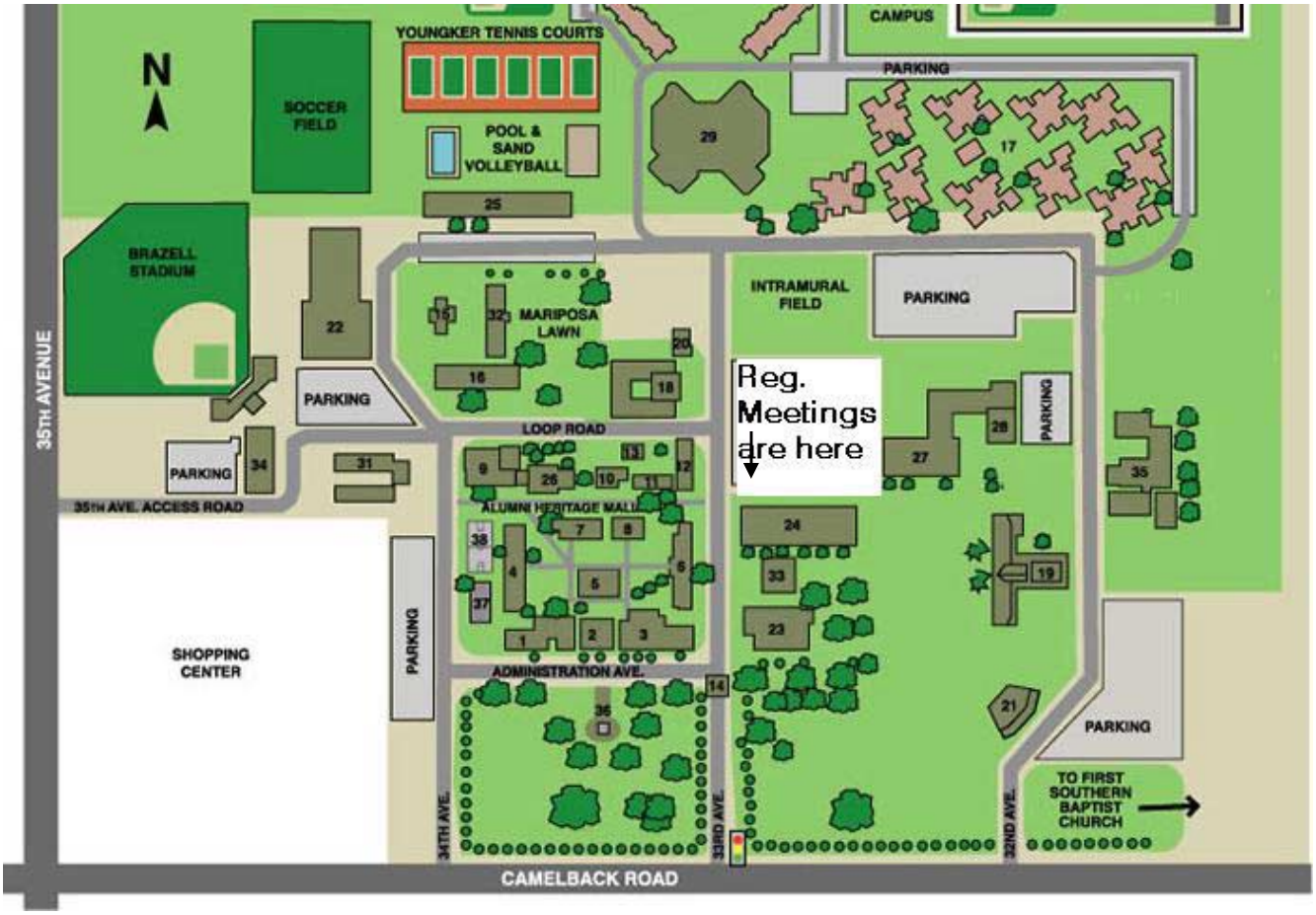
SAC Meeting and Observing Sites

Cherry Rd. Star Parties

Take I-17 north to the Cherry Rd exit. Turn west (left) and continue on Cherry Rd for about 5 miles. Turn Left on the dirt road just past the sign that says Cherry 6. Note you turn in the direction Opposite the arrow on the sign. The site is 3/4 down the road on the left.

General Meetings

7:30 p.m. at Grand Canyon University, Fleming Building, Room 105: 1 mile west of I-17 on Camelback Rd., North on 33rd Ave., Second building on the right.



SAC Membership Services

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

- ☐ $28.00 Individual Membership
- ☐ $42.00 Family Membership
- ☐ $14.00 Newsletter Only
- ☐ $10.50 Nametag for members, Pinned Clasp
- ☐ $12.00 Nametag for members, Magnetic Clasp (will be mailed to address below)

Magazine Subscription Services

The following magazines are available at a discount to club members. Check the magazines you wish to subscribe to or renew, and pay the club treasurer. Please allow 3-4 months for the order to be processed.

- ☐ Sky & Telescope $33.00/yr
- ☐ Astronomy $34.00/yr
- ☐ Astronomy $60.00 for 2 Years

Please Print

Name:_____

Address:_____

City:_____ **St:**_____ **Zip:**_____

Phone:_____

E-Mail:_____

Make Check Payable to : SAC

Bring completed form to a meeting or mail it with your remittance to:

SAC Treasurer
c/o Paul Dickson
7714 N 36th Ave
Phoenix, AZ 85051-6401

☐ **Check here if this is an update of information already on file.**

SAC on the Internet

SAC has several E-mail mailing lists. To subscribe, send an email to the email address and put Subscribe in the subject box.

SAC-Announce@freelists.org: SAC-Announce is a mailing list for just club announcements, Typically 3-5 messages per month.

SAC-Forum@freelists.org: SAC-Forum is a general discussion mailing list. Topics should be related to Astronomy or SAC

SAC-Board@freelists.org: SAC-Board is a mailing list for discussions of club business. If you'd like to see how the club is run (or not run), or have a question about the club, this is the list to read. Typically month to month matters are discussed.

AZ-Observing@freelists.org: AZ-Observing while not a Sac list , is well attended by SAC members. This is the list to with observing places around Arizona. Find out where people are going and what they saw.

Printed Newsletter

Sac can save a lot of money if you download the PDF version of the newsletter. PDF files are readable by both PC's and Macs. When the newsletter is published, a message will be sent to the address indicated above with the URL of the newsletter. Check the box below if you don't have access to the internet or if your prefer a printed copy.

☐ **Please send me a hard Copy of the newsletter**

SAGUARO ASTRONOMY CLUB

August 2006

5643 W. Pontiac Dr
Glendale, AZ 85308-9117

Phone: 623-572-0713
Fax: 623-572-8575
Email: newsletter@saguaroastro.org

Videmus Stellae

www.saguaroastro.org

SAC Schedule of Events 2006

SAC Meetings

January 13th, 2006	July 14th, 2006
February 10th, 2006	August 11th, 2006
March 10th, 2006	September 8th, 2006
April 14th, 2006	October 6th, 2006
May 12th, 2006	November 3rd, 2006
June 9th, 2006	December: TBA

ATM & Astro-Imaging Group Meetings

January 10th, 2006	July 11th, 2006
February 7th, 2006	August 8th, 2006
March 7th, 2006	September 5th, 2006
April 11th, 2006 ?	October 3rd, 2006
May 9th, 2006	November 7th, 2006
June 6th, 2006	December 5th, 2006

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Jan 21st, 2006	1752	1919	0044	F
Feb 18th, 2006	1818	1942	2335	F
Mar 18th, 2006	1842	2005	2230	F
Apr 22nd, 2006	1908	2037	0347	F
May 20th, 2006	1928	2108	0157	C
Jun 17th, 2006	1943	2129	0029	C
Jul 22nd, 2006	1938	2117	0346	C
Aug 19th, 2006	1911	2042	0240	C
Sep 16th, 2006	1854	1958	0135	C
Oct 14th, 2006	1759	1921	0033	F
Nov 11th, 2006	1723	1850	2316	F
Dec 16th, 2006	1725	1854	0449	F

F= Flat Iron; C= Cherry Road