Saguaro Astronomy Club

SACnews

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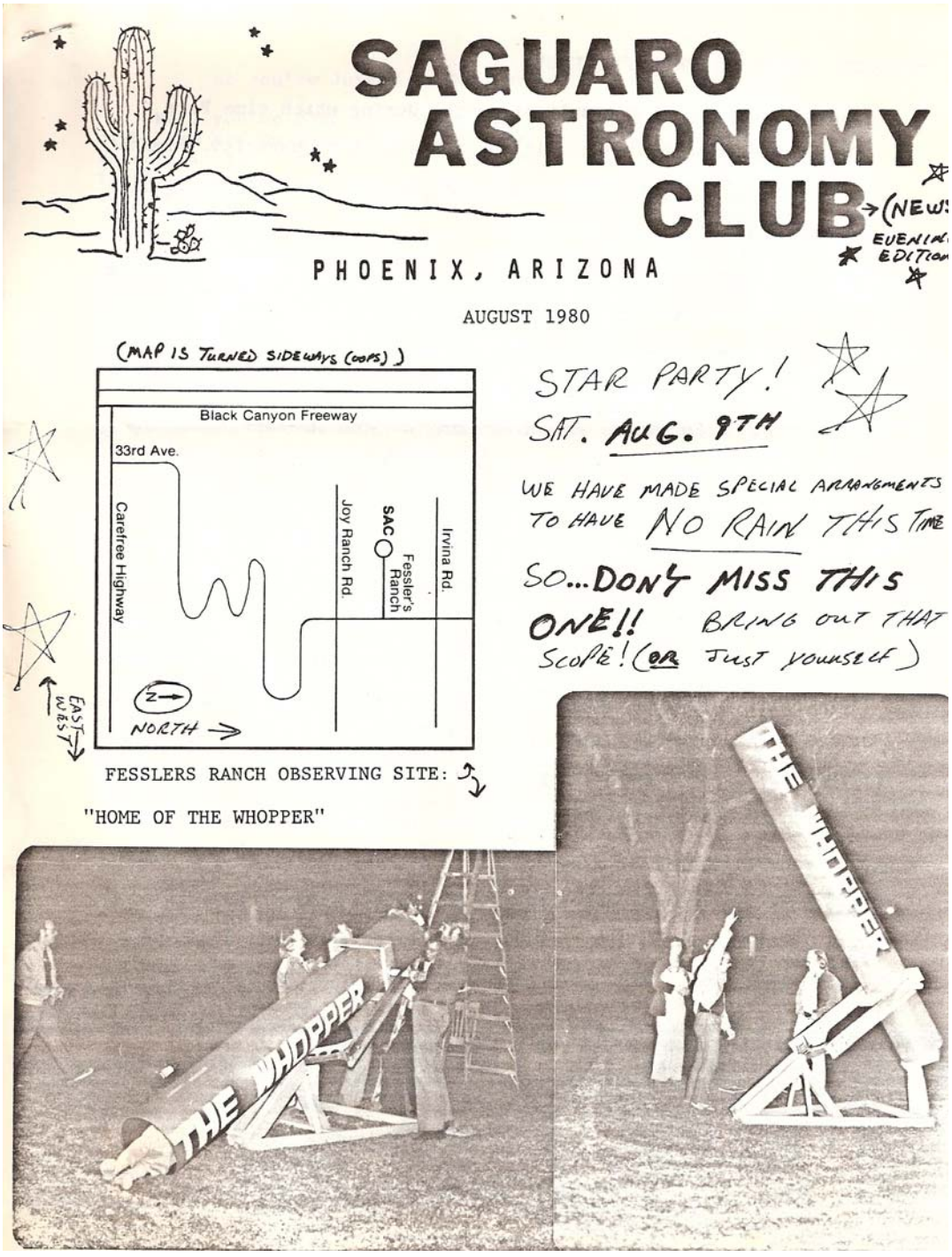


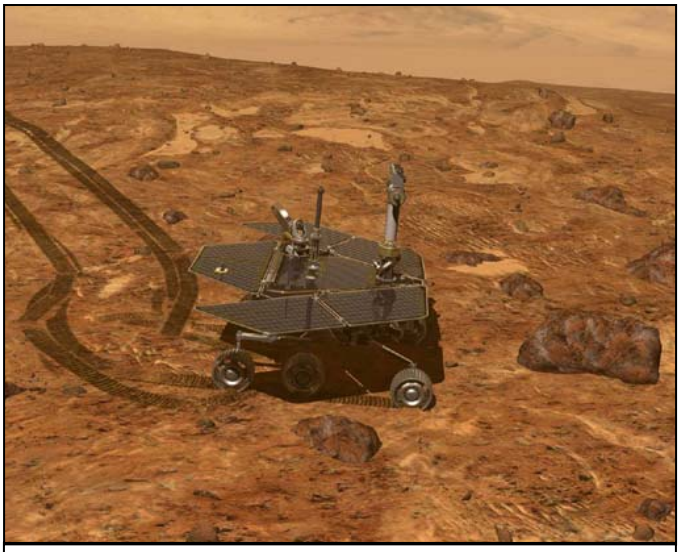
NASA Space Place

No Mars Rock Unturned

by Patrick L. Barry

Imagine someday taking a driving tour of the surface of Mars. You trail-blaze across a dusty valley floor, looking in amazement at the rocky, orange-brown hillsides and mountains all around. With each passing meter, you spy bizarre-looking rocks that no human has ever seen, and may never see again. Are they meteorites or bits of Martian crust? They beg to be photographed.

But on this tour, you can't whip out your camera and take on-the-spot close-ups of an especially interesting-looking rock. You have to wait for orders from headquarters back on Earth, and those orders won't arrive until tomorrow. By then, you probably will have passed the rock by. How frustrating!



Are these rocks of any scientific interest? With the new AEGIS software, the Mars Rovers, Spirit and Opportunity, will be able to judge for themselves whether a scene is worth a high-resolution image. (Artist's rendering.)

That's essentially the predicament of the Spirit and Opportunity rovers, which are currently in their fourth year of exploring Mars. Mission scientists must wait overnight for the day's data to download from the rovers, and the rovers can't take high-res pictures of interesting rocks without explicit instructions to do so.

However, artificial intelligence software developed at JPL could soon turn the rovers into more-autonomous shutterbugs.

This software, called Autonomous Exploration for Gathering Increased Science (AEGIS), would search for interesting or unusual rocks using the rovers' low-resolution, black-and-white navigational cameras. Then, without waiting for instructions from Earth, AEGIS could direct the rovers' high-resolution cameras, spectrometers, and thermal imagers to gather data about the rocks of interest.

"Using AEGIS, the rovers could get science data that they would otherwise miss," says Rebecca Castaño, leader of the AEGIS project at JPL. The software builds on artificial intelligence technologies pioneered by NASA's Earth Observing-1 satellite (EO-1), one of a series of technology-testbed satellites developed by NASA's New Millennium Program.

AEGIS identifies a rock as being interesting in one of two ways. Mission scientists can program AEGIS to look for rocks with certain traits, such as smoothness or roughness, bright or dark surfaces, or shapes that are rounded or flat.

In addition, AEGIS can single out rocks simply because they look unusual, which often means the rocks could tell scientists something new about Mars's present and past.

The software has been thoroughly tested, Castaño says, and now it must be integrated and tested with other flight software, then uploaded to the rovers on Mars. Once installed, she hopes, Spirit and Opportunity will leave no good Mars rock unturned.

Check out other ways that the Mars Rovers have been upgraded with artificial intelligence software at nmp/TECHNOLOGY/infusion.html#sciencecraft.

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

A Blast From the Past

By Rick Tejera

OK, I know ht e mail can be slow, but August 1980? What's going on here? Well, a few eeks ago I was contacted by Terri Lappin from the TAAA. Seems she was cleaning out her desk and found a bunch of old SAC newsletters dating back to 1979. She kindly contacted me to see if I wanted them before she tossed them. Needless to say I eagerly accepted custody. I'm still sorting through them to see what we have, but so far I haven't found anything I already have from other sources (Paul Dickson & Gene Lucas)

Speaking of Gene, he contacted me after I made mention of this find on SAC-Forum and said he'd go through his "Collection and we could compare and see what we have altogether. Once we inventory the "History of SAC" The next stage will be to figure ou the best way to digitize them. Scanning would seem to be the easiest way, But a lot of these issues are pretty faded, so we may have to explore other options (I'm open for suggestions).

Given the amount of stuff I have here, let alone what Gene certainly has, this looks to be a somewhat medium to long term project. Once done, I think this will be an invaluable addition to the SAC Archives.

In browsing through them I read a lot from names of folks I heard of but never met. A few that have just recently gone on to look at the sky from the other side as well. Also finally figured out where Fessler's Ranch was.(about 2 miles South of what is now Anthem, Near 33rd Ave. & W Joy Ranch Rd in Desert Hills).

The earlier editions showed a club a few years old, looking to establish itself. It didn't seem to take long as it was only a few years before the clubs membership reached 100. It seems to be the magic number for the club.

From an editors standpoint, the biggest change was the effect of technology. I was still in hogh school whe the earliest issue I 've got was published. This was back in the day of mimeographs and ink stencils. It makes me appreciate the wonders of 1's & 0's. I wonder if I could've done this job 30 years ago?

Once the project is under way, Gene has promised (he may not know this yet, wink, wink , snicker, snicker) an article recalling those early days of SACnews.

If anyone else has any old issues of SACnews hanging around, Please let me know. Nothing would be better than a complete set.

Oh and by the way, Does anyone have the Story on "The Whopper"?

Stay tuned.

Such-A-Deal

For Sale: Meade Starfinder 10" Dobsonian Reflector $550: IDEAL starter scope or affordable upgrade for someone with aperture fever. In very good condition - one careful lady owner!
Factory-supplied focuser has been replaced with an upgraded model. Price includes two eyepieces (9.7mm & 26mm Super Plossls) & a counterweight system. Seller is located in Flagstaff.
Contact: Dr Diane Hope cell phone: ▼ 480-627-9472 or email: di.hope@asu.edu (please put 'Telescope' in subject line of message).

For Sale: Orion 80mm ED apochromatic refractor 600mm f/7.5 on a altazimuth mount with slow motion controls, 25mm Plossl eyepiece. $400.00
Orion 102mm Maksutov-Cassegrin: 1300mm f/12.7 on a Orion Tele Track Tracking mount, 25mm Plossl eyepiece. $300.00
Orion Sky Quest XT8 Classic reflecting Dobsonian telescope, 203mm, 1200 focal length, f/5.9, 9x50 right angle finder scope, with 25mm and 10mm Sirus Plossl eyepieces, and laser collimator.$300.00

Call Damion at 602-240-5421 damionbow2@aol.com

Call For Observations–Perseus

By A.J. Crayon

For Perseus there is quite a range of observing instruments reported, a goal about which we should be proud. I probably could have done better and not selected the two dark nebula Barnard 1 and 2. I had to hunt down one of my recent observation and give some thanks to Rick Tejera. They just don't match up with those found in the summer Milky Way.

M 34

14X70, binoculars; Dick Harshaw: Rich grainy group dominated by an "X". About 30 stars counted.

8" f6, Newtonian; 9X; Charlie Whiting: using the finder scope (9X), this object is dimly visible as a small group of a few dim stars. At **38X**, using the 8" telescope, this open cluster is large and full of bright sparklers. It must be 40-45' wide. There are about 2-dozen stars resolved of 5th to 7th mag. At **75X**, there are maybe 3-4 dozen stars resolved. The cluster fills the FOV. At the center, there are a group of stars resembling a stick figure of an airplane with swept-back wings. Many of the stars appear faintly blue. This is an interesting object. From a darker site and at **60X** there are probably 50 to 100 stars resolved. Overall I had the impression that I was looking at a large spoke wheel.

8" f6, Dobsonian, 48X; Rick Tejera: Very diffuse but rich cluster. Main body of stars forms a "disjointed X" shape along a major axis E-W. About 40 stars within the main body of the cluster with another 20 or so outside the main "X" shape.

8" SCT; 65X; Dick Harshaw: Exquisite! Many blue and white stars, it is loose and large. It contains: Otto Struve 44 and John Herschel 1124 (center), John Herschel 1123 (N of center) and John Herschel 2155 (NE quadrant).

11" SCT; 115X; Dick Harshaw: I call this "The Spread-Eagle Man" cluster. It resembles a spread-eagle man (axis running NW to SE) with two bright stars for his "eyes". The arms are raised, the legs spread apart.

Melotte 20, or the **Alpha Persei** moving cluster

11X80 binoculars; Rick Rotramel: ASTERISM - pL, pB, pRich, about 12 stars, near alpha PER, forms the shape of a saxophone, like, pretty cool, man.

9X50 Finder; Charlie Whiting: At 9X, in the finder scope, this is a very large open cluster, about 3-degrees wide. It is AKA the Alpha Perseus Association. α Per must be 2nd mag. It is very bright and yellow. There are 11 fairly bright stars that form an extended horseshoe figure with α Per at the north tip. The figure is open to the west. There are 2 more bright stars at the northwestern boundary. They might be a double. All the bright stars appear to be 4th and 5th mag. There are about 6 stars of 6th or 7th mag sprinkled about.

60mm f5/8, 14X; Rick Tejera: Very Rich cluster. Starting at α Per there is a "U" shaped chain of star aligned roughly E-W The chain runs E from α Per and turns S and back to the west, south of α Per. Four stars make up the northern leg of the chain and another four the "U" curve and 5 the southern leg including several Variables (According to SkyMap) There is a double (WEB1) just to the SW of the southern end of the chain. Just east of this main chain of stars is another chain of stars aligned N-S. This chain contains about 6 stars in a straight line.

80mm f6.26 Refractor; Charlie Whiting: Huge OC! Starting at α there's a long chain of stars that sweeps away from α going a little south of east, turns south around a pair of stars hugging the boundary, runs almost due west, turns south again and runs back east again. Including α, I count 22 stars participating in this huge "S" pattern. I count another 13 stars inside of, outside of and away from the pattern. α is 2nd mag. 6 of the stars are 4th or 5th mag. 1/3 of the rest are 6th or 7th mag. The balance of remaining stars is 8th or 9th mag.

Barnard 1 and **Barnard 2**

8" f6, Dobsonian, 60X; Rick Tejera: Seen as a dark starless lane about 15' wide running E-W through about 3 Eyepiece FOV's there were more stars to the north than south, indicating to me that this DN is more than just one lane. Note that SkyMap & the SAC DB consider B1 & B2 one object, along with B202-6.

14.5" f5.2, Dobsonian, 60X; AJ Crayon: Wide region of almost 2° with fewer stars than in neighborhood. There is a sprinkling of stars from 9th to 12th mag. Once outside the dark nebula there is a faint background that comes into view without averted vision. These dark nebulae are near the Perseus, Taurus and Aries borders.

IC 348

8" f6, Newtonian, 38X; Charlie Whiting: sits just south of o Per. A triangle of 3 stars is evidence of the open cluster's location. Two of the three corners seem to be double stars. Omicron has a tint of blue color. At **60X**

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four more stars are resolved. Three stars are within the triangle, plus one outside towards the west. At **120X** there are 12 or 13 stars resolved. The double at the northwestern corner of the triangle is showing some color. The brightest of the pair is yellowish and the fainter star is bluish. At **160X** the count remains at 12. The cluster is of medium size at 10'. With so few stars it is very sparse. I went back to **60X** to look for nebulosity. A slight halo surrounds omicron. It is marginally more pronounced with a narrowband filter, which casts the star as a bright green.

8" f6, Dobsonian, 60X; Rick Tejera: Sparse cluster located in the crook of a V shaped chain of stars. There are several double involved, not sure if they are within the cluster or not, they are Burnham 880, which was pretty much dead center of the cluster, ǫPer (Burnham 535) is just NW of the cluster and is part of the chain of stars surrounding it. This is another case of the field stars being more interesting than the object itself.

NGC1496

Is a small *segment of a ring* according to the NGC Description that has 10 stars in 6'. The last 2 open clusters are part of the Herschel 400 program.

8" f6, Newtonian, 60X; Charlie Whiting: This open cluster is a challenge for my urban site. 2, 3 or 4 dim stars were barely resolved using averted vision. 2 of the stars could be seen all the time. The other 2 stars blinked in and out of view. At **120X** the count was 5, 6 or 7 stars. At **160X** the total count was 9 stars.

8" f6, Dobsonian, 60X; Rick Tejera: Once again the area around the object is more interesting than the object itself. Two chains of stars running NW-SE that meets toward the center of the FOV. From here there is a chain of about 4 stars running east from the end of the first chain, which reminded me of the shape of Andromeda. The cluster is to the SE of the end of this chain, but I really did not see much if anything there, maybe a few stars.

NGC1513

8" f6, Newtonian, 38X; Charlie Whiting: None of the cluster stars are visible at this low power. But, there is a very distinct pattern of stars that lead the eye to where the cluster resides. About 10 stars form an inwardly winding spiral. NGC 1513 sits right in the middle of the spiral. At **60X** only 6 or 7 dim stars are resolved. At **120X** the star count doubles. Ten of the stars are within a circular pattern with 2 outliers. At **160X** there are a total of 15 stars resolved. Going back to **38X** I can now detect 2 very dim stars at the precise location of the cluster.

8" SCT, 83X; Dick Harshaw: Delicate- use averted vision. The rich field competes fiercely with it. It has a "C" shape, and a 10th mag star lies a few minutes N.

8" f6, Dobsonian, 133X; Rick Tejera: Interesting cluster. Noted brighter stars to the north and a ringlet of faint stars to the south. At first I didn't think the brighter stars were part of the cluster, but it looks like they are according to SkyMap. At least they fall in the circle defining the cluster. About 7 stars make up the ringlet and there is mottling within along with a few more stars resolved. The brighter stars to the north form an I shaped pattern. Noted about 5 stars here. A chain of 6 pretty bright stars runs NW-SE along the top of the field.

11" SCT, 115X; Dick Harshaw: A faint ringlet of six stars plus 3 or 4 outliers. This cluster is 129 million years old. It lies 30,000 light years from the galactic center and just below its plane.

16" f4.4; Rick Rotramel: OC - pL, fB, fRich, about 60 stars, oblong shape.

NGC1528

8" f6, Newtonian, 38X; Charlie Whiting: this OC is large, sparse and fairly dim. It is about 15' in diameter. There are 2 bright stars, 9th mag, just outside the NE boundary of the cluster. At **75X** there are sixteen 9th and 10th mag stars resolved. At the western side of the cluster, 7 of the stars form the figure of a fishhook. At **120X** there are now 36 stars resolved down to 12th mag. Three years later I re-observed NGC 1528. At **38X** there were about 11 stars resolved. Nine of the stars form a pair of concentric arcs. At **60X** there are 20 stars resolved in the main condensation and about another 10 stars in a separate string to the east and northeast. At **120X** a total of 30 to 35 stars are resolved. This open cluster is pretty large at 24'. I would classify it as sparse and not very condensed. At **160X** the cluster overflows the eyepiece FOV. I still count about 35 stars. If there are more stars, they are fainter than 12th mag, which is the limit from my urban site tonight.

8" SCT, 83X; Dick Harshaw: Twin arcs of stars. Rather faint and spread out E to W. Note the tiny clump of stars on the NE edge- run the magnification up on this splotch and see if you can resolve it.

8" f6, Dobsonian, 80X; Rick Tejera: Large Cluster very densely packed. I lost count after 100 stars. There are several interesting chains of stars within the cluster. There is an interesting asterism just to the east, which reminds me of a divining rod. Some may see it as an inverted "Y".

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President's Corner

By Steve Dodder

No sooner had the words left my lips, than Rosie and I were pressed into service.

On New Year's Eve, 2008, I got a call from Margie Williams, asking if we'd be interested in coordinating the North Rim contingent of the Grand Canyon Star Party. We talked it over for a couple days. There was actually a lot to consider, not the least being, we'd certainly miss all the friends we've made over the last 10 years at the South Rim, or my altitude challenges. (The north Rim is 1,000 ft higher.) After careful consideration, we decided to say yes, we'd do it. How hard can it be? ;-) We'll see.

Rosie and I always had ideas on how to improve the South Rim event. We were the first to set up a "wandering" solar scope-expanding from just Yavapai point to Mather, to Hermit's Rest, to basically the entire park. Anywhere people were, that's where we'd go. Sometimes, we'd show a lot, sometimes not, but that's how we learned. They called us, "The Dynamic Duo" from the start. Now, pretty much everywhere we go, we see volunteers showing the Sun and talking about the Star Party. We did the same at the North Rim, basically in defiance of instructions, but that turned out very well, too. So, it's put up or shut up time. I've asked the Board to approve a banner for announcing the event. I've written a web page to go on our site for the same purpose. It'll link to the "official" sponsor, TAAA, for continuity, but mentions SAC's sponsorship and contact info.

Our plan for the GCSP will be the same as the south rim. Reserve a camp site for the week, and you stay for free if you set up your telescope at night for the same period. Space is limited, so early responses are better. Dean Ketelesen begins taking reservations on March 1st for the South Rim. I figure, we'll have it figured out by then, so we'll do the same. The only catch being the south rim doesn't close, and the north rim opens on May 15th.

My goal for the North Rim is to attract a "core" of individuals that can camp and stay for the week. Maybe 5 or six scopes we can count on. That way, any additional people can stay for a day or two or three and have no guilt about moving on. It depends on what your lodging arrangements are, as the North Rim is much more remote than the South. I'm working out details on how many spots we need for the whole week, but I'd like some early feedback, too.

So, if you're interested in having the best time ever under the stars, drop me a line!

Steve Dodder

President, Saguaro Astronomy Club
Director, Stone Haven Observatory

Visit my website: http://www.stargazing.net/astroman

Monthly Trivia Question

Who was the youngest person to fly in Space?

Last Month's Answer: What recreational activity enjoyed today, developed from a proposed recovery system (Never employed) for the Gemini Program?

The Hang Glider. Early Concept for Gemini Included the ability to land on Terra Firma. The Rogallo Wing, which is the basis of the modern hang glider was chosen to allow the Gemini Capsule to glide & Steer to a dry landing. Too many development problems were unable to be overcome in time to use the Paraglider. Coupled with massive cost overruns due to constant redesign and retesting after failures the project was canceled.

Inflated on the ground and released by helicopter, this paraglider was conceived for bringing Gemini Spacecraft back to earth and is seen here descending under the control of test pilot E. P. Hetzel.

March 2008

SUN	MON	TUE	WED	THU	FRI	SAT
				☾		1 SAC Star Party at Saddle Mountain
2	3	4	5	6	7 ●	8 DOTM Star Party, Antennas
9	10	11	12	13	14 ☽	15
16	17	18 ATM Meeting 1930, Paul Lind's House	19	20	21 ○ SAC Meeting, GCU 1930	22
23	24	25	26	27	28	29 ☾
30	31					

Schedule of Events for March 2008

Mar. 1st	SAC Star Party at Saddle Mountain: Sunset 1829; Ast Twilight 1952; Moonrise 0346
Mar 7th	Moon is New at 1014mst.
Mar. 8th	DOTM Star Party at Antennas: Sunset 1835; Ast Twilight: 1957; Moonset 2001; Ast Twilight: 0527
Mar. 14th	Moon at first Quarter at 0345mst.
Mar. 18th	ATM Sub group meeting at Paul Lind's house
Mar. 21st	Moon is full at 1139mst.
Mar. 21st	SAC Meeting at Grand Canyon University at 1930, Speaker TBA
Mar. 29th	Moon at Last Quarter at 1446mst.

Future Planning

April 5th-6th	All Arizona Messier Marathon, Farnsworth Ranch

(Continued from page 5)

11" SCT, 115X; Dick Harshaw: In my field orientation, it had an "epsilon" shape with the bottom half of the epsilon most prevalent. About 60 stars counted. It is 370 million years old. Its earliest stars are B8 and A0 types, and 165 members have been counted. It lies 30,000 light years from the galactic center and right in its plane. If the stars were shrunk in size until the Sun was a baseball, this cluster would be would be 5,600 miles in diameter with its "baseballs" (stars) 635 miles apart. Doesn't look that sparse in the eyepiece!
16" f4.4; Rick Rotramel: OC - L, B, Rich, about 150 stars, nearly round. Pretty.

Call for Observations

Funny, my records show we haven't done Taurus. Now sure how came but this will put and end to that. Let's head to the main show piece of showpieces, **M 45**, for instance. Try it naked eye, how many stars can you count, and with binoculars, don't forget the size in addition to telescope. While grousing about with M 45, look up **vdB 20** and **vdB 23**. They are nebulosity for Electra and Alcyone, respectively. Now slip over to the northeast and find **NGC1514**, an attractive 10th mag planetary nebula. What features do you find attractive? Moving almost 3° to the southeast, find the dark nebula **Barnard 7**, its narrow east/west. I find some differences amongst coordinates for this dark nebula; so if you don't see what you are expecting, then try panning around for a degree or so noting differences. The final selection is **NGC1647**, a large bright open cluster, which is located in the Hyades. Brian Skiff has this one listed as questionable for naked eye visibility. Check and see if you can detect, certainly from a dark site only. The list for this month may see short for object count but there is much to say about its contests.

April will find us in Ursa Major, for third time but there's much to see here in the way of galaxies. We will stay in the western part of the constellation, saving the eastern for another month. One of the western most galaxies is **UGC 4305** a rather moderate size irregular with a magnitude of 11.1. Next is **NGGC2681**, a Herschel 400 entry that is about ½ the size of the first entry but brighter at mag 10.3. See if you can spot something more than the brighter middle, don't forget to try a hood. The next 3 galaxies are all on the Herschel 400 list. First is **NGC2742**, a late type spiral galaxy. Its moderate size should display some nice detail. **NGC2768** could be the largest and is quite bright at magnitude 9.9. Try to ferret out as much detail as possible. The last **NGC2841** in addition to being a Herschel entry is also on the SAC list of the 110 Best NGC Objects. No wonder, it has the brightest magnitude at 9.2 is very elongated with some nice detail in its spiral arms. See if you can estimate the PA of elongation – without cheating. Then compare your results. Finally there's **NGC2850**, a rather large, late type spiral. What do you estimate its magnitude and surface brightness – again without cheating. Then compare your results.

Dark of the Moon Star Parties-2008

Date	Sunset	Moonset	Twilight	Location
January 5th	1737	-	1905	Antennas
February 9th	1813	2113	1937	Antennas
March 8th	1835	2001	1957	Antennas
May 3rd	1915	-	2049	Cherry II
July 5th	1944	2157	2129	Cherry II
August 2nd	1927	2022	2103	Cherry II
August 30th	1857	-	2024	Cherry II
October 4th	1814	2125	1937	Antennas
November 1st	1742	2010	1906	Antennas
December 27th	1734	1748	1903	Antennas

Bits & Pisces, Minutes of January 18th, 2008 Regular Meeting

By Rick Tejera (For AJ Crayon), Secretary

Steve Dodder Banged the gavel promptly at 1900 convening the first meeting of his administration.

After the traditional SAC Welcome 2 visitors introduced themselves.

The first order of business was the treasuers report, given by outgoing treasurer Paul Dickson. Paul reported the transition of duties to new treasurer Charlie Whiting was underway, They still needed to arrange a meeting at the bank to transfer signature authority. Charlie had at the time, 4 renewal checks waiting to be processed as soon as the transition was complete (*Ed Note; by the time you read this, the transfer has been completed*). Paul also reported that we currently have $4000.00 Plus in Assets.

Several members noted the absence of new First Lady, Rosie Dodder. Steve mentioned that she was preparing for surgery and wasn't ps to coming to the meeting. For the record She came through her fine and is well on the road to recovery. We hope to see her at the next meeting.

Also on the mend from recent surgery was AJ Crayon, who asked me to sub for him in taking the minutes and also to announce the 2008 All Arizona Messier Marathon, which this year will be Sat. April 5th. The date, while not optimal was the best choice considering the phase of the moon around the more favorable equinox. Although 110 obnject won't be possible, 107-108 should be doable. M74 & M77 will have set by Sunset, but on the other side of the coin, M30 should be unusually easy. As usual the event will be held at the Farnsworth Ranch south of Arizona City. A map & directions are on page 10 of this edition for your reference.
The field will be available on Friday night as well for those who wish to get in an extra night of observing.

Like last year, participants will be required to sign a waiver of liability. AJ Will have the forms available at the next meetings and at the site the night of the event. Youcan also download the form at: http://www.saguaroastro.org/content/messier-images/marathon-liability.pdf.

A topic brought up at the board meeting Prior to the General meeting was SAC Hosting the North Rim Edition of the Grand Canyon Star Party. Steve Dodder was contacted regarding this as the previous host no longer were able to host the event. Steve & Rosie are willing to do most of the legwork and in fact have already made headway. The are in contact with the angers in charge and will have more information as progress is made. Steve wants to price a Banner for the event. He will get an idea of the cost and advise the membership accordingly. Oh, and by the way the dates for Both the south Rim & North Rim are Jun 21st-June 28th.

Moving on to Show & Tell: Dick Harshaw presented hisn update of the SAC database which includes radial velocity information. He had several CD's for those interested.

Steve Coe Showed some images taken with his new DSLR piggybacking on his also new ED-80. Included were images of two naked eye comets. 17P Holes & 8P Tuttle.

A quick review of upcoming events was presented by Steve who also mentioned that he'd like to expand the Novice group. IN this vain he's offered the use of Stone Haven Observatory as a location for possible future events.

After the break our new Vice president introduced our main speaker for the evening, Klaus Brasch, with a talk titled "Rediscovering astrophotography with a DSLR".

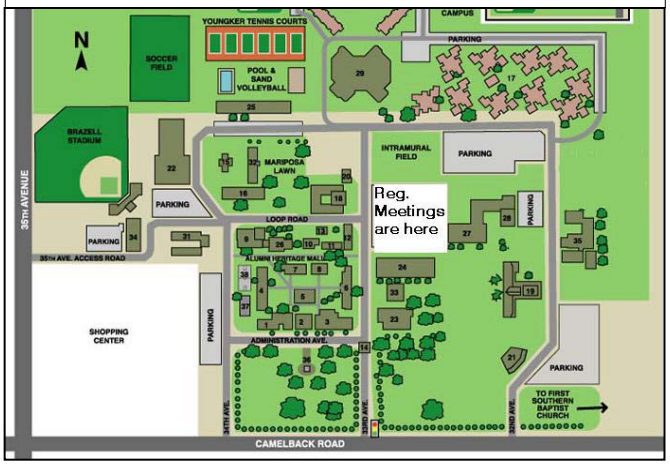
Klaus had lots of good advice on selecting a camera and modification available to optimize it for astrophotography work, all demonstrated by some fantastic images.

After the meeting, he usual suspect & a few unusal ones retired to JB'S restaurant for dinner, snacks Coffe & Astro talk.

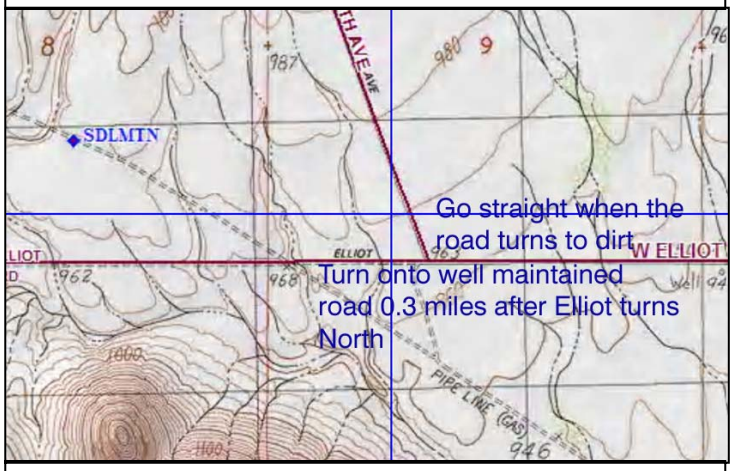
(Ed. Note: Due to Space limitations the minutes from the November meeting & The Jan Board meeting will be published in the next issue. Rht)

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.

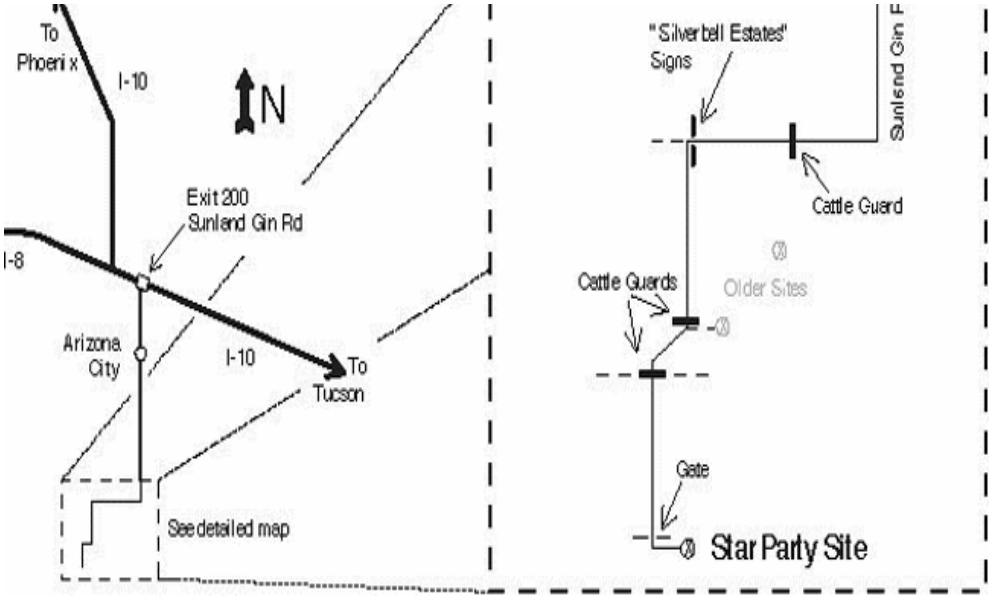


Saddle Mountain Star Parties



I-10 west to Wintersburg Road, turn left from the offramp and then about 10 miles south to the "T" at Elliot Road, turn right (west) onto Elliot. Be careful of the dip and cattle guard along this road. After a few miles traveling on the blacktop, the road turns sharply right and becomes a dirt road. Keep going straight, do not make that sharp right turn, and be careful of two dips in the road. As you come out of the second dip there is a 45 degree turn to the right. So you turn away from the line of power poles onto a smooth dirt road. This happens about 0.3 miles from the pavement. Continue on this road for 0.6 miles and there is an opening in the birm on the left that I marked with rocks. It has room for lots of observers.

All Arizona Messier Marathon



Take 1-1 0 to exit 200 (Sunland Gin Road). From here it is about 29 miles to the site. Turn right (south) after exiting the freeway. After about 15 miles, the pavement ends and about one mile further, the road turns sharply to the west. After another f our miles, the main road will turn south just after the "Silverbell Estates" signs. Three miles past the signs, the road will veer of f to the west, and five miles further, the road will pass through a gate. Turn left immediately after the gate and continue f or another 2/3 of a mile, driving over a fence. The site is to 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
- ☐ $12.50 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

Make Check Payable to : SAC

Name:_____

Address:_____

City:_____ St:_____ Zip:_____

Phone:_____

E-Mail:_____

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

SAC Treasurer
c/o Charlie Whiting
4526 W Purdue Ave
Glendale, AZ 85302

☐ **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

February 2008

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Videmus Stellae

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SAC Schedule of Events 2008

SAC Meetings

January 18th, 2008	July 11th, 2008*
February 22nd, 2008	August 15th, 2008
March 21st, 2008	September 12th, 2008
April 10th, 2008*	October 10th, 2008*
May 23rd, 2008	November 14th, 2008
June 13th, 2008*	Holiday Party, TBA

* *Rescheduled Meeting Date*

Future Planning

April 5th, 2008	All Arizona Messier Marathon
May 30th-June 1st, 2008	5 Mile Meadow Star Party
November 28th-30th, 2007	Autumn Stargaze

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Jan 5th, 2008	1737	1905	0608	A
Feb 2nd, 2008	1824	1929	0507	S
Mar 1st, 2008	1829	1952	0346	S
Apr 26th, 2008	1911	2042	0100	S
May 3rd, 2008	1915	2049	0401	A
Jun 28th, 2008	1945	2130	0142	C
Jul 26th, 2008	1935	2113	0021	C
Aug 23rd, 2008	1903	2033	2303	C
Sep 27th, 2008	1815	1938	0455	S
Oct 25th, 2008	1747	1910	0432	S
Nov 22nd, 2008	1726	1853	0331	S
Dec 120th, 2008	1730	1859	0128	S

S= Saddle Mountain; C= Cherry Road; A=Antennas