Saguaro Astronomy Club

SACnews

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Inside This Issue

Reflections, My Favorite Observing Sessions, Part 1

By A.J. Crayon

For some time now I have wanted to put together an article describing some of my more memorable experiences in astronomy but just didn't seem to have the time. It wasn't until recently that time became available for such a project. Most of the experiences that follow have to do with observing and observing sessions, but there are notable exceptions.

This journey begins in November 1979 with an observation of the moon through a telescope owned by my son 10 year old Marcus. I didn't even know how to focus the telescope nor did I know just what to expect. I thought it peculiar that stars had black round centers, never discovering the focusing knob. The telescope, I learned later, was a 3" f6 Newtonian on a wobbly tripod mount. One night I decided to look at the moon, it was first quarter I believe. After discovering focusing knobs and how to focus and aiming far enough ahead of the moon to permit the vibrations to dampen out and it drifts through the field of view, I was hooked! The view was breath taking. But the most memorable, even to this day, were south lunar peaks bathed in sunlight while their bases were in darkness.

On March 22, 1980 Marcus and I went to our first star party, on a partly cloudy Saturday at McDowell Mountain Park. There were two hardy people there, Jerry Maurer, with his 10" Newtonian and Steve Coe with his brand new 8" f6 Newtonian. Only observations I remember were Jupiter, its moons and The Great Nebula in Orion. Their advice was to purchase and study *Newtonian Notes* by Peter Francis, which I did. By Memorial Day enough had been learned from this book and an 8" f6 Newtonian on a German Equatorial mount was purchase and I was on my way. This telescope served me well until well building a 14.5" Dobsonian in 2000.

I discovered and joined the Saguaro Astronomy Club and after learning how to use the telescope and the sky from my backyard I was ready for a dark site. It was called Fessler's Ranch and was located in a place that is now named Anthem, a very nice subdivision of houses and shopping centers. When it got dark I was completely lost trying to identify constellations, as there were far more stars than I have ever seen or dreamt about! Luckily people like Wally Brown and Pete Manly were there to calibrate my senses.

One visit to Fessler's was quite memorable because of an anticipated lunar occultation of Jupiter – wow! My family was still curious about this interest in astronomy and the occultation. So they wanted to come with me. They were briefed, as much as I could, given my limited knowledge, and an observing sequence was scheduled. During immersion our youngest Brian, age 6, would have the longest look of about 10 seconds, followed up by quick peaks by Marcus then Pat. So, on the night of the event, with everything correctly setup the occultation begins and Brian takes first look. And when he saw Jupiter being occulted by the moon he was so surprised that he stepped back and commanded Marcus to take a look. I was impressed by such selflessness. Marcus took a look and quickly gave way to his Mom, and then I got a 3 second view. We were all quite excited and, while waiting for the emersion; clouds moved in and clouded us out. We packed up and went home quite satisfied at what we saw. Of course during this year there was the great triple conjunction between Jupiter and Saturn. I was disappointed, later, to realize the planets were

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NASA Space Place

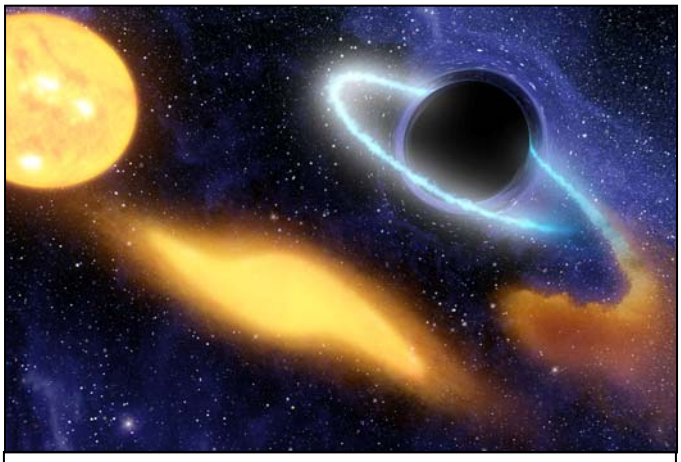
Early Bird Gets the Worm or "Black Hole Breakfast

by Dr. Tony Phillips

We all know that birds eat worms. Every day, millions of birds eat millions of worms. It's going on all around you! But how often have you awakened in the morning, stalked out in the dewy grass, and actually seen a bird having breakfast? Even though we know it happens all the time, a bird gulping a worm is a rare sight.

Just like a black hole gulping a star…

Every day in the Universe, millions of stars fall into millions of black holes. And that's bad news for the stars. Black holes exert terrible tides, and stars that come too close are literally ripped apart as they fall into the gullet of the monster. A long burp of X-rays and ultraviolet radiation signals the meal for all to see.



In this artist's concept, a giant black hole is caught devouring a star that ventured too close.

Yet astronomers rarely catch a black hole in the act. "It's like the problem of the bird and the worm," says astronomer Christopher Martin of Caltech. "You have to be in the right place at the right time, looking in the right direction *and* paying attention."

A great place to look is deep in the cores of galaxies. Most galaxies have massive black holes sitting in their pinwheel centers, with dense swarms of stars all around. An occasional meal is inevitable.

A group of astronomers led by Suvi Gezari of Caltech recently surveyed more than 10,000 galactic cores—and they caught one! In a distant, unnamed elliptical galaxy, a star fell into a central black hole and "burped" a blast of ultraviolet radiation.

"We detected the blast using the Galaxy Evolution Explorer (GALEX), an ultraviolet space telescope," explains Gezari. Her team reported the observation in the December 2006 issue of *The Astrophysical Journal Letters*. "Other telescopes have seen black holes devouring stars before," she adds, "but this is the first time we have been able to watch the process from beginning to end."

The meal began about two years ago. After the initial blast, radiation diminished as the black hole slowly consumed the star. GALEX has monitored the process throughout. Additional data from the Chandra X-ray Observatory, the Canada-France-Hawaii Telescope and the Keck Telescope in Hawaii helped Gezari's team chronicle the event in multiple wavelengths

Studying the process in its entirety "helps us understand how black holes feed and grow in their host galaxies," notes Martin.

One down, millions to go.

"Now that we know we can observe these events with ultraviolet light," says Gezari, "we've got a new tool for finding more."

For more on this and other findings of GALEX, see www.galex.caltech.edu. For help explaining black holes to kids, visit The Space Place at spaceplace.nasa.gov.

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not always in the night sky.

In 1981, at a SAC meeting, I met two members that had observing habits similar to mine; they were Steve Coe and David Fredericksen. Our method of observing was simple and that was to stay in one constellation as long as possible, observing as many objects as you could until it was no longer effective to view. It appeared most observers of jumped around the sky during their sessions, our plan seemed more efficient. This same year I completed observing the entire Messier Catalog and was presented the telescope plate by the, then Deep Sky Chairman Wally Brown. In the fall, on a trip down Dugas Road, a much darker site than Fessler's was the first time I viewed the Veil Nebula. It was in Steve's 17.5" Dobsonian – oh wow! I found it in the 8" and was still able to detect some filamentary structure.

The next year I started with some piggyback astrophotography. It was pretty easy, but the following year was a big step forward in my observing experiences. Someone found a site near Hillside, AZ. Although the surrounding elevation was approximately 4000 ft, the mountaintop where the site was located had an elevation of 5000 ft. From this site we were above the dust and haze coming from where ever. And the Zodiacal light was visible to the naked eye all the way to the zenith! We made many visits with the likes of Jerry Rattley, Jerry Maurer and Jim Stevens and, of course, Steve and David. I still believe to this day this was the best site despite it could only hold about 8 vehicles. Speaking of Jim Stevens, you may recall it was Jim Stevens' telescope that Tom Bopp used to discover that famous comet, only that wouldn't happen another 13 years.

Until Hillside I had troubles finding NGC147 and NGC185 that are satellite galaxies of Andromeda. They weren't visible from my backyard, remember I was a beginner at this time, nor from Fessler's despite having the latest start charts – Wil Tirion's Sky Atlas. From Hillside these were easy to find – by star hopping. Jerry Rattley said, and I convinced myself, that if it were on Tiron and the night was dark enough I'd find it in the 8". OK, I saw NGC147 as irregular and very-very faint, whereas NGC185 was very faint and a little elongated. Both observations were at 80X.

This site didn't last long. It was on private property, which the landowner permitted us to use. Eventually he leased the hill top site to the EPA for them to put air quality sniffers there. They consisted of two or three trailers powered by diesel engines and ran almost 24 hours a day.

Later that year, from Fessler's, Ron Cachola talked me into star hopping to NGC2903, in Leo. This was the first galaxy I observed that had more than just a brighter center; it had faint appendages and a bright stellar nucleus. More proof that my observing skills were developing or developed. Thanks Ron. The view in Steve's 17.5" was spectacular!

In the spring of 1984 Steve and friend of ours Bill Anderson, decided on a trip south of Tucson to get a good view of omega Centauri, Centaurus A and other show piece objects in the constellation. We chose the base of Mount Hopkins, which was the home of the then Multiple Mirror Telescope. This is the trip I left all my warm clothes at home. Luckily I was able to borrow clothing from Steve and Bill to stay warm, as the night was an exceptional one both for observing and objects. I still remember the view of omega Centauri at 175X in the 8". I don't believe it has been surpassed or even equaled – even with the 14". At least not right now. It was also the first time I slept over night out on the desert floor. I figured it they could do it, so could I! The two-night session was interrupted the next day by quickly deteriorating weather that turned from rain into hail. Fortunately we left before the storm hit.

During this time doubles stars were observed from any one of a number of sites, including my backyard. I thought I had it understood, telescope diameter and focal length, until one night in 1985 at Table Mesa Rd. We, Steve, the late Curt Taylor and Bob Erdmann, were doing double stars and the one of interest was Alnitak – zeta Orionis. In the 8", at 175X, it was mostly bluish-white and light orange, round but elongated during moments of good seeing. In Curt's 6" f15 folded refractor the double was easily split. Maybe not as bright, but easily split. Bob's 8" f7 also did the trick but it wasn't as cleanly split as in the refractor. So much for pure aperture, focal length also has to be considered for splitting doubles.

The following year was our first trip to Lowell Observatory where we met with Brian Skiff and observed planets through the 24" Clark refractor. When the clouds moved in we went to the library in the basement and saw such wonderful treasurers as an original NGC catalog, Barnard's dark nebula and one of Tombaugh's Pluto discovery plates. Other observing sessions, during this year, included the first views and photographs of Comet Halley. It was one of the extremely few times I got up late at night to go observing.

By 1987 a number of SAC members were submitting observations and drawing to the periodical titled *Observer's Guide* and continued until it ended in 1992. This set of observations were converted into book form and titled *Night Sky Observer's Guide*, by the originators Bob Kepple and Glen Sanner, now residents of Sierra Vista, AZ. The following year was the first close approach of Mars since I had been into astronomy and, to make the most of the apparition I made two drawings every 3 days for about two weeks.

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Call For Observations– Auriga

By A.J. Crayon

This is our second trip through Auriga. It is home to 5 asterisms; The Kids, Flying Minnow, Smiley Face, False Kids and Herschel's Telescope. To learn more about these checkout the SAC Asterisms list on our web page. So much for extra observing activities. Now let's get on to the observations. Enjoy!

NGC1664

8" f/6, 60x: Very rich cluster. Slightly ova in an E_W line with two streamers of stars leading out to the SE & SW respectively from the main body. About 50 stars noted in the main body of the cluster with much mottling due to unresolved stars. About 20 stars in the SW chain and 15 in the SE chain. Very nice cluster.

8" f6, Newtonian, 160X; Charlie Whiting: This faint OC is NW of the bright star, TYC 2906-152-1. About 8 stars on the brighter level form a figure of a diamond with 1 side missing. Four dimmer level stars fill in the figure. Surrounding the diamond are about 18 stars to fill out the 18' diameter of the cluster.

14.5-inch f5.2, at 90X; AJ Crayon: this cluster has 33 stars, one of 10th mag and the others from 11th to 12th mag, all in a 15' area. The star form a slightly elongated parallelogram positioned in a north of northeasterly position with 8 stars trailing to the southward from the southeastern corner.

16" f4.4 Newtonian, Rick Rotramel: OC - fL, pB, pR, crescent shaped, ~ 50 stars with dimmer ones in the background.

18" f4.5, Dobsonian, 135X; Dan Gruber: This cluster has about 20 mag 9 - 10 stars and at least another 20 mag 11 - 12 stars in a 10' central area. There are another 20 or so mag 9 - 10 stars extending out to 20' total diameter. A mag 8 star is at the SE edge of the cluster. There are several rows and arcs of stars: ~6 stars running N/S in the central area, ~8 stars extending SE from the center and ~6 stars extending E.

Collinder 62

8" f6, Newtonian; Charlie Whiting: Instead of using SAC's coordinates for Cr 62, I chose to use Brent Archinal's. The shift is about 25' to the west and about 2' to the north. Doing this places more of the bright stars within the 35' diameter of this OC. There are 7 fairly bright stars formed in a circle on the south side. There are 5 fairly bright stars forming an open 'Y' shape on the north side. Going to **120X** reveals 11 or 12 faint stars scattered all about.

14.5-inch f5.2 at 90X; AJ Crayon: one bright star of 8th mag surrounded by 38 others from 10th to 12th mag. The fainter ones form a 15' circle around the brighter star.

18" f4.5, Dobsonian, 74X; Dan Gruber: Large and sparse cluster extending over about 30 - 40'. There are two mag 8 stars to the SE and SW. The cluster has about 20 stars up to mag 10 and another 20 stars dimmer than that.

NGC1893 and the nebula IC 410

8" f6, Newtonian, 60X; Charlie Whiting: This is a large OC (25' as per Brent Archinal) consisting of about 15 stars on the brighter level and another 15 on a dimmer level. All are scattered about at random. As for the nebula, **IC 410**, I could tell at **38X** that a large nebula was present because the sky background was a brighter gray. At **60X** with a narrowband filter I think I detected some texture. But it was barely there.

14.5-inch f5.2 at 90X; AJ Crayon: This cluster has 52 stars in a 10' area, from 9th to 13th mag, the limit for the telescope on this night. They are in a chain situated in a northeasterly position. There is a dark area at the southwest end of the chain and is **IC 410**.

18" f4.5, Dobsonian, 74X; Dan Gruber: The cluster has two concentrations of stars. There is a C - shaped arc of about a dozen mag 10 -12 stars to the SW, with the arc opening toward the SW. There is another concentration of 15 - 20 mag 10 - 12 stars to the E. There are several possible doubles. The emission nebula **IC 410** is most obvious at the W end of the cluster with a UHC filter. It forms a C - shape opening to the SW and is considerably brighter at the N side of the arc.

NGC1896

8" f6, Newtonian, 120X & 160X; Charlie Whiting: There is a grouping of stars NE of the bright star, TYC 1859-1083-1. Five stars form the outline of the letter, 'X'. Three dim stars accompany the south side of the 'X'. One very dim star accompanies the NW tip of the 'X'. There are also 3 outlier stars above the north side of the 'X'. Total 12 stars in the FOV.

14.5-inch f5.2 at 90X; AJ Crayon: This cluster is adjacent to three 9th mag stars forming a right triangle and are adjacent to its hypotenuse. It has 11 stars to 12th mag in a 10' area. The brightest star of the triangle is 8.5 mag. SAO77158.

18" f4.5, Dobsonian, 135X; Dan Gruber: This object is a puzzle. My GOTO computer took me to an object in TAU consisting of a 15' X 20' group of about 10 mag 10 - 11 stars mostly in two E - W rows, plus an isolated mag 8 star to the N. When I manually moved to the

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coordinates I have for **NGC1896** (RA 05:25:40, DEC +29:18) I was indeed in AUR observing a small, dim group of about 10 - 12 mag 11 - 12 stars arranged roughly in the shape of a flattened "3" and oriented N - S in the eyepiece.

M36

8" f/6 @ 48x: Very large very bright, about 30 stars resolvable in central part of cluster, another 20 star around the periphery. Several arm extending outward, about every 60 degrees in a sort of pinwheel shape. Very spread out and evenly spaced.

8" f6, Newtonian, 133X; Charlie Whiting: Fairly small cluster. About 20 bright stars spread apart. There are several small chains of stars forming straight lines crisscrossing each other. No colors; mostly grays and dull whites. There's a double star near the middle. Together both stars look bluish. Not a showpiece, but worth looking at. At **120X** this is a beautiful OC. There are about 30 bright and as many faint stars fan out in almost straight lines from the center. Reminds me of a pinwheel fireworks display. The double star STF 377 is widely split in the center. SEI 355 is a much tighter double on the SE edge.

14.5-inch f5.2 at 90X; AJ Crayon: This magnificent cluster is very bright and very large. I counted 28 stars in one quadrant. This gives an estimated 112 stars from 9th to 13th mag in a 15' diameter. From my backyard and at **140X** it has 50 stars from 8th to 12th mag; the brightest star is in the center and forms an isosceles triangle with the base to the west. There are two chains of stars emanating from the triangle; one from its apex that bends to the east and then to the northeast. The other chain is from the east side of the base and bends towards the west.

18" f4.5, Dobsonian, 135X; Dan Gruber: This open cluster has about 50 mag 9 - 12 stars in a 20' area. There are at least 4 possible doubles plus two long chains of stars running SE/NW and SW/NE. The chains appear to cross near their N ends. There also is a chain of 5 stars running SW/NE, offset about 2' toward the cluster center from the longer chain in that direction.

Barnard 34

8" f6, Newtonian, 120X; AJ Crayon: Dark nebulas don't have magnitudes so I don't know how to describe its darkness. It is about 25" and, at low power appears as large and double lobed.

14.5-inch f5.2 at 60X; AJ Crayon: One normally associates dark nebulae with summer Milky Way, but they do exist in the winter Milky Way and this is one example. Low power and wide fields are best for this type of deep sky object. This is a large star-less area that covers about 1/3 of the one-degree field of view. There are 34 stars that, rather poorly, define the perimeter because of irregularly large gaps between the stars. There were three stars of 10th mag that were the brightest in the field.

18" f4.5, Dobsonian, 74X; Dan Gruber: This void is about 20' X 30' elongated ESE/WNW in a sparse star field.

NGC2126

8" f/6 @ 80x: Seen as very loose & sparse cluster, only about 15 stars loosely concentrated around the edge. Interesting chain of 4 stars to the SE.

8" f6, Newtonian, 160X; Charlie Whiting: This very faint OC is located just SW of the bright star, TYC 3382-1505-1. Going to **320X** helped mainly because the glare of the bright star was now out of the FOV. I counted 10 dim to very dim stars in the FOV. The 2 brightest seem to be a wide double. To see this I had to use the monk trick, a black towel over the head and eyepiece.

14.5-inch f5.2 at 90X; AJ Crayon: This, rather faint and small, cluster has a 9th mag star to its northeast and 26 others from 10th to 13th mag.

16" f4.4 Newtonian, Rick Rotramel: OC - fL, pB, pR, triangle shaped, ~ 50 stars, near a bright star.

18" f4.5, Dobsonian, 135X; Dan Gruber: This is a dim, loose open cluster of about 20 mag 10 -12 stars. There is a mag 8 or 9 star nearby to the N.

Call for Observations

For our April observations that will appear in the May issue we will find some nice stuff in Hydra, the serpent. There are over 120 objects brighter than 13th mag – we have a lot of work to do here. First up is **M48** and should be well know to Messier Marathoners. But here we should spend some time with a quality observation for this cluster is large, bright and has a lot of stars. Is it visible in your finder? Let us know if you see it or not and your finder size. Guess I'm determined for you us observe something from the MCG and here it is **MCG -01-24-001** located at R.A. 09 10.8 Dec -08 54. The MCG indicates its inner regions are very black and mostly edge-on. It is 11.3 mag and 4.3'X1', so don't expect much. The galaxy **NGC2781** is listed as pretty bright, small and elongated, so check it out and see if you can detect any more detail. Another galaxy that seems worth a look is **NGC2986**; try averted vision on this one. Continuing out quest we find next is **NGC3054**. Now swoop south to **NGC3132**, yes it is a long way from being in Hydra, but you will like the diversion. Try as much power as you can, filters, hood and averted vision and you will be rewarded even more! One of my favorite deep sky objects in this constellation is **NGC3242** also known as the Ghost of Jupiter. Spend

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President's Corner

By Rick Tejera

OK, lots to talk about so let's get right to it. At the February Board meeting Dan Gruber made case for holding an Official dark of the moon star party. We liked the idea and presented it to the membership at the regular meeting. There was a little discussion about maintaining Star Party Etiquette, but again the idea was well received. Dan then took the ball and drew up the schedule of dates, ephemeris' & sites, which is published on page 10 in the member services section. Thanks to Dan for suggesting and taking on the details.

I'd also like to thank Claude Haynes & EVAC for offering to provide a snack & coffee table at the Messier Marathon. I remember the setup they has at last years All Arizona SP and certainly appreciated the hot cocoa at 0200. I hope you all thanked them as well.

The Board started to make headway in the planning for our 30th anniversary bash. I passed out surveys at the meeting and got 17 responses back The survey is published again in this issue for those who could not attend the March meeting. Please feel free to return it to me by Email (Just let me know the answers if you can't copy the page or mail it to me at the address on the back of this issue. I'd like to have the results by mid April so please respond quickly. Jenn had given me some info on a possible location and I've run some numbers, which I'll present at the meeting. Turned out better than I thought, although, I'd certainly like to entertain more possibilities. Again any ideas are welcome. The board will meet again before the April meeting to discuss the Dinner again and see where we are. Digging through old Newsletters I found the the 20th Anniversary bash cost members $20.00 per person. I'd like to keep member costs around $25.00. This makes the key issue: how much is the club willing to support? That'll be the main topic at the April board meeting. Feel free to join us & chime in.

OK, Moving on. Mark your calendar for Saturday, April 21st. Join us at Thunderbird Park in Glendale for our Spring edition of the Thunderbird Starwatch. According to Gene Lucas (A Charter member and unofficial club historian) we've been going to Thunderbird every year of the club's existence. The event gets better each year. Please join us to help show an appreciative public the wonders of the night sky.

We're getting near monsoon, so let make the most of our observing time. Galaxy season is upon us, so get out there and make headway into your observing lists. My plan is to knock off some of the 112 Spring galaxies I've got left in the H400. Yep 112 out of 156 left in total. I'd been hoping to finish off the winter objects but Meteoria had other ideas.

That's my plan, what's yours? You don't have one, you say? Well have I got an idea for you. Turn to page 4 of every issue and you'll find plenty to observe. AJ's Call for Observations lists interesting objects for you to observe. AJ puts out lists for the coming two months so you should have plenty to keep you busy. Once you observed them, don't forget to keep AJ busy and turn them in for publication in Call For Observations.

Well, I'm just about done, Until next time,

Clear Skies
Rick

Monthly Trivia Question

The right "Eye" of the Man in the Moon is really Mare Imbrium, the central portion of a gigantic multi-ring basin formed by a colossal meteorite impact several billion years ago. Which of the following is approximately the same size as Mare Imbrium? A) The Pacific Ocean; B) The North Atlantic Ocean: C) Australia; D) Texas or E) New York State

Last months Answer:

Who's initials are drawn in the lunar soil?

Prior to leaving the lunar surface for the last time, Apollo 17 commander Gene Cernan used a lunar rake to draw his daughter Tracey's initials in the lunar soil. He then became "The Last Man on the Moon"

May 2007

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2 ○	3	4 SAC Meeting, GCU 1930	5
6	7	8	9 ☾	10	11	12 SAC Star Party, Cherry Rd.
13	14	15	16 ●	17	18	19 DOTM Mon Star Party- Antennas
20	21	22	23 ☽	24	25 RTMC Astron-omy Expo	26 RTMC Astron-omy Expo
27 RTMC Astron-omy Expo	28 RTMC Astron-omy Expo	29	30	31		

Schedule of Events for May 2007

May 2nd	Moon is Full at 0309 mst.
May 4th	SAC General Meeting at Grand Canyon University at 1930, Speaker: TBA
May 9th	Moon at 3rd Quarter at 2127 mst.
May 12th	SAC Star Party at Cherry II, Sunset 1927, End Ast. Twilight 2059, Moonrise 0311.
May 16th	Moon is new at 1227 mst.
May 19th	Dark of the moon Star Party at the Antennas Sunset 1931; Twilight 2109, Moonset 2311
May. 23rd	Moon at first Quarter at 1403mst
May 25th-28th	RTMC Astronomy Expo; Go to: http://www.rtmcastronomyexpo.org/

Future Planning

June 9th-16th	Grand Canyon Star Party, go to: http://www.tucsonastronomy.org/gcsp.html
June 15th-16th	Five mile Meadow Star Party, Near Happy Jack

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The next year, at a Sedona Star Party I observed the faintest galaxy in the 8". It was magnitude 14.8 NGC4637 and its less than 1 arc-minute size was seen only with averted vision and moments of good seeing. Of course the other 6 brighter galaxies in the same field were also seen and included NGC4638, NGC4660, NGC4647, M59 and M60.

One real standout this same year was observing Saturn and its rings occult 28 Sagittarii, a magnitude 5.4 star, on a rather hot evening during July. There were a number of us there, setup in a line about 20 feet apart. All reported seeing the star in the rings and its occultation by ringlets in the A-Ring, Cassini Division, B-Ring and C-Ring. We saw it between the C-Ring and the ball and saw first and second contacts. Right after second contact all reported as being able to see the start through the planet! It gradually disappeared as the planet drifted past the star. We called out observing conditions based on how well the rings were seen. We were surprised to hear, almost at the same time, one had great conditions and another had pathetic conditions. This is a testament to the fact that the boiling atmosphere has many small cells of different temperature gradients.

The year 1990 is the first I have recorded for a night with a 10 out of 10 for seeing and transparency. It was up in the Coconino National Forest at about 7800 ft elevation. Steve, Bill Anderson and myself found this site. It was to serve us well for many a year but its rough terrain and small space did not make it useful for a large gathering of observers.

April 1991, on one of our visits to Sentinel, AZ, we found Venus shining through the zodiacal light that cast our shadows on the desert floor. This didn't impact me very much until, to my dismay, that galaxies in Leo Minor and Leo didn't have much contrast. We knew it was a darker site than Buckeye but while looking through the telescope, I couldn't figure out why. Only after stepping back from the telescope and looking toward the constellations did I realized how much they impacted my observing attempts. The avoidance procedure was to observe on the other side of the central meridian.

In March of 1993 we had the first organized All Arizona Messier Marathon at the Arizona City, or Farnsworth site. Despite the cloudy weather members of SAC, EVAC and TAAA attended. At evening twilight there were 37 marathoners, but by morning twilight there were only 15 left observing. The others were asleep in warm sleeping bags. The awards went something like this. First Place, Paul Lind, 94 objects; second Place, Jim Stevens, 82 objects and third Place, Leon Knott, 75 objects. Certificates for 50 or more went to 4 other observers.

The Saguaro Astronomy Club had David Levy as its speaker to discuss his new comet discovery, Shoemaker-Levy, 1993e. There was such an air of excitement in his voice as he described the potential comet of the millennium. It was ripped apart by a close encounter with Jupiter and its gravitational attraction and was expected to crash into that planet the following July. This gave us one year to observe and prepare for its demise. In several slides David showed, the comet appeared like 20 comets: nucleus, coma and tails all in contact and lined up, coma-to-coma and tail-to-tail. On the coma side opposite the tails is a sharply defined dust lane tangent to the comas, running parallel to it and extending well past the comas. Talking with him afterwards it is obvious he is well satisfied by this discovery. It shows in the glint of his eyes and grin on his face! Consider myself fortunate to be around for this discovery and to know its discoverer.

Later in the month Steve, David, Bill Anderson and myself made an observing trip to the north rim of the Grand Canyon. We had discussed such an excursion for several years but finally made it this year. It is a beautiful trip along Echo Cliffs through Marble Canyon as well as the beautiful Vermillion Cliffs. Unfortunately observing sites were hard to come by and we chose one that limited our view of the night sky by the tall pines.

There was an 87% Solar Eclipse from Phoenix and, while others made trips into nearby New Mexico, I stayed home and went to work. Yet many there wanted assistance at observing this event, so I setup several shoeboxes with tiny pinholes at one end so everyone could see. In a sense I was the star of the show. I didn't realize that the shadows cast by leaves would mimic the eclipsing sun, a great joy by many and even the one who first discovered this interesting pattern – it wasn't me. About the middle of this year saw the beginnings of Comet P/Shoemaker-Levy 9 impacting Jupiter. It was July and monsoon season was upon us, we didn't have much confidence it would be visible. Oh how wrong we were! Steve Coe and his wife came over one evening to watch the spectacle. It raised hair on the back of my neck to see a comet impacting this gas giant forming such large scars, several earth diameters wide, on the southern hemisphere and to know this was happening real-time. A few days after the event Rich Walker indicated his favorite was an infrared image of a plume on the Jovian limb about 4 earth diameters high. I, subsequently, saw the image he was talking about and agree. It isn't as beautiful as many of the color images of the event but just understanding what was going on made up for it. Thanks Rich.

Well, space is running short and I'm only halfway done. Guess I'll just have to wait until next month. Until then.

Bits And Pisces: Minutes of the March 2nd, 2007 Meeting

By Jennifer Polakis, SAC Secretary

Forty-four of us like-minded folks converged upon GCU for the hoopla including at least 5 guests: Claude Haynes, East Valley Astronomy Club President, twisted our arms to have EVAC sponsor a midnight coffee/snackie table for AJAAMM (A.J.'s All Arizona Messier Marathon).—Thanks Claude and EVAC; it was glorious! Carole Lee, SAC Treasurer circa 1992, paid a visit; Chris Hammerham a transplant from Wisconsin set his roots down in AZ skies (he's going to love this place!); Steve Lazurus made a 3rd visit, and our guest speaker's son, Tom Healy, dropped by to see his Dad in action.

Treasurer Paul Dickson gave the money stats and urges membership renewal if you haven't already.

President Telrad Tejera spoke to setting a schedule for star parties, passed out a survey for ideas for our 30th Anniversary Party and warned us of upcoming events including:

Thunderbird Stargaze on April 21st. Per Gene Lucas, this is also our 30th Annual public star party for Glendale Parks and Rec. April 14th is the Dodder's Stone Haven Observatory. potluck.

Steve Coe gave copies of the last release of SAC Club Database to 3 folks to proof and also had loads of paper copies of all 2000 objects in their various catalogs. He had a poster of photos of the GREAT HALE BOPP T-Bird star party where more than 1,000 folks showed up!

AJ gave another presentation on the AJAAMM which has now come and gone with great successes including a calculated find of that impossible M30 by Tom Polakis.

Show and Tells: Tom Polakis on recent excursions to the Bart Bok scope at KPNO and the Steward Mirror Lab in Tucson; Steve Dodder on the upcoming Stone Haven Pot Luck/Star Party on April 14th.

Jack Jones informed us of the SAC 110 Best Lunar Objects. He had a great collection of various Moon Books to assist with this project which 3 SACsters have completed to date: Jack Jones, Joe Goss, and Steve Dodder.

Finally...the moment we came for: Vice President Paul Lind introduced our guest speaker, the esteemed Mr. Professor Dr. David Healy, an amateur astronomer from Sierra Vista who spoke on the building of his 32" Junk Bond Observatory and his tremendous successes in asteroid hunting. Quite a trip but worth the ride! David has discovered more than 400 asteroids and would like for us to suggest to our next guest speaker, Rik Hill, to save him a comet discovery

Telrad crashed the gavel at 9:45 and 23 of us headed out to JB's for more of the same.

(Continued from page 5)

some time here with power, filters and averted vision to coax out its detail. While here don't forget to note what color you see. This leaves a lot for us to come back again some time.

For June I have scheduled Leo and will pick some of its brighter galaxies, staying towards the western part. This way the eastern part is saved for another clear night. This list will be quite different than ones in the past and I'm not sure how it will work. But SAC observers have a habit of surprising me. So, surprise me! First start with **NGC2903**, a nice multi-armed barred spiral up near the blade part of the Lion's head. The next selections field of view contains two or three galaxies, depending on telescope size. The two easy ones are **NGC3226** and **NGC3227** at magnitude 12.4 and 11.3 respectively. Don't let this fool you, as the latter of the two is the larger. Give us a good, detailed description of what you see. The next field to view also contains two galaxies and they are **M95** and **M96**, both being barred spirals. Compare and contrast the two. From this field we can hop a mere 50 arc-minutes northeast to the next 3, count them three, galaxies. They are **M105**, **NGC3371** and **NGC3389** all ellipticals. The NGC galaxies have other names; look them up and include with your observations. The final galaxy is **NGC3377**, another elliptical. If you center this in a one-degree field there are other things to see and distract you. Identify those and include with observation.

30th Anniversary Dinner Survey

1) Are you planning to attend the 30th Anniversary Dinner
   Yes
   No

2) How many, includng yourself would be attending?
   1_____
   2_____
   3_____
   4_____

3) What tinme of year would you prefer the event to be held?
   Summer_____
   Fall_____
   Winter_____

4) Would you consider having the dinner in December, in lieu of our regular Holiday Party?
   Yes_____
   No_____

5) How much, per person, would you be willing to spend?
   $0.00, I think the club should pay for the event
   < $25.00_____
   $25.00-$50.00_____
   More than $50.00_____

6) What would be your preferred day & Time for the event?
   Friday Evening
   Saturday Evening
   Saturday Afternoon
   Sunday Afternoon

Please return to me by email @ saguaroastro@cox.net or mail it to my home (address on back page) before April 18th. If you've already turned one in, please do not resubmit.

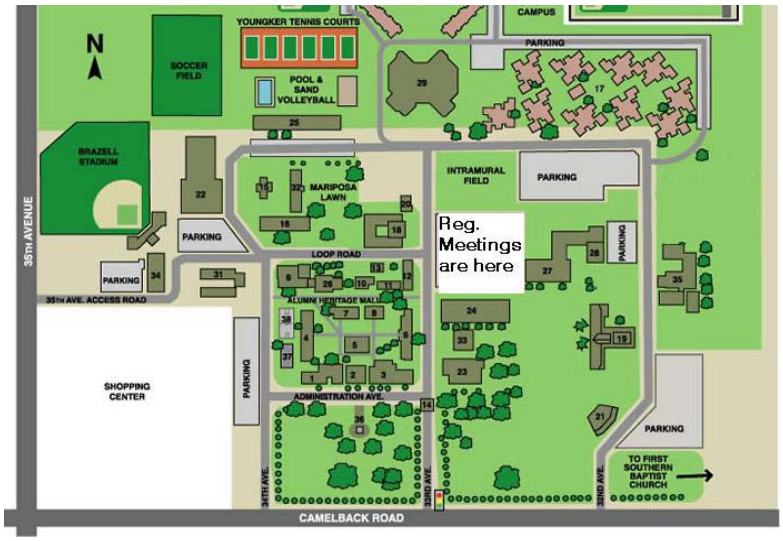
I'll have the results by the May meeting.

Thanks
Rick

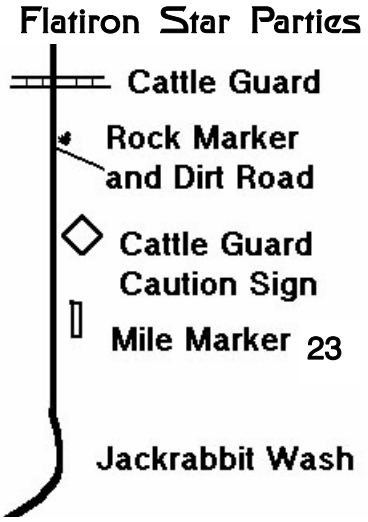
SAC Meeting and Observing Sites

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.



Flatiron Star Parties



Head west on I-10 to the 339th Ave exit (exit 103). Turn North (right) and go two miles to Indian School Rd. Turn West (left) on Indian School and go 2 miles to 355th Ave. Turn North (right). This will turn into Wickenburg Rd. Follow this road for about 12 miles. Just after mile marker 23 you will go through Jackrabbit wash and pass a cattle guard sign. There is a dirt road just after the sign, marked by white painted rocks. Turn on to this road and follow it about .9 miles. Just after you pass through a wash, you'll see the field on your left. If you hit the cattle guard, or the dirt road your on is next to a fence, you've missed the correct road. Go back and look for the white rocks. (see detail map above).

Dark of the Moon Star Parties

Date	Sunset	Moonset	Twilight	Location
May 19th	1931	2311	2109	Antennas
June 16th	1941	2142	2127	5 Mile Meadow
July 14th	1942	2019	2124	Cherry Road
August 18th	1913	2157	2044	Cherry Road
September 15th	1835	2028	2000	Cherry Road
October 13th	1804	1911	1926	Antennas
November 10th	1735	1749	1900	Antennas
December 8th	1726	____	1855	Antennas

SAGUARO ASTRONOMY CLUB

April 2007

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Videmus Stellae

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SAC Schedule of Events 2007

SAC Meetings

January 5th, 2007	July 27th, 2007
February 2nd, 2007	August 24th, 2007
March 2nd, 2007	September 28th, 2007
April 6th, 2007	October 26th, 2007
May 4th, 2007	November 16th, 2007
June 1st, 2007	December, 2007
June 29th, 2007	Holiday Party-TBA

March 16th-17th, 2007	All Arizona Messier Marathon
June 15th-16th, 2007	5 Mile Meadow Star Party
November 9th-10th, 2007	Sentinel Schwaar Stargaze

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Jan 13th, 2007	1725	1854	0336	F
Feb 10th, 2007	1811	1935	0223	F
Mar 10th, 2007	1835	1958	0112	F
Apr 14th, 2007	1901	2029	0447	F
May 12th, 2007	1927	2059	0311	C
Jun 9th, 2007	1940	2125	0140	C
Jul 7th, 2007	1944	2128	0013	C
Aug 11th, 2007	1920	2054	0522	C
Sep 8th, 2007	1845	2011	0415	C
Oct 6th, 2007	1809	1932	0314	F
Nov 3rd, 2007	1737	1902	0207	F
Dec 1st, 2007	1723	1851	0057	F

F= Flat Iron; C= Cherry Road