

# Saguaro Astronomy Club



# SACnews

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## 30 Years of Observing in Arizona

On Saturday, Sept 29th, The Saguaro Astronomy Club celebrated our 30th Anniversary at the Challenger Space Center in Peoria. 53 Members & Guests were in attendance. Dr. Paul Davies opened the night with a great talk on the possibilities of time travel, after which we enjoyed a fine meal. After dinner, I spoke briefly about the highlights and achievements of the club & it's

members over the past 30 years. Finally, I presented 5 "President's Awards" to members who have had a lasting & positive impact of the club.

Since pictures are worth a 1000 words, see some photo's from the night on pages 8-9.



Three of the guys who got it started 30 years ago. From left to right, Charter Members, Dwight Bogan, Gene Lucas and Lynn Blackburn.

# NASA Space Place

## The Red (Hot?) Planet by Patrick L. Barry

Don't let Mars's cold, quiet demeanor fool you. For much of its history, the Red Planet has been a fiery world.

Dozens of volcanoes that dot the planet's surface stand as monuments to the eruptions that once reddened Mars's skies with plumes of glowing lava. But the planet has settled down in its old age, and these volcanoes have been dormant for hundreds of millions of years.

Or have they? Some evidence indicates that lava may have flowed on Mars much more recently. Images of the Martian surface taken by orbiting probes show regions of solidified lava with surprisingly few impact craters, suggesting that the volcanic rock is perhaps only a million years old.

If so, could molten lava still occasionally flow on the surface of Mars today?

With the help of some artificial intelligence software, a heat-sensing instrument currently orbiting Mars aboard NASA's Mars Odyssey spacecraft could be just the tool for finding active lava flows.

"Discovering such flows would be a phenomenally exciting scientific finding," says Steve Chien, supervisor of the Artificial Intelligence Group at JPL. For example, volcanic activity could provide a source of heat, thus making it more likely that Martian microbes might be living in the frosty soil.

The instrument, called THEMIS (for Thermal Emission Imaging System), can "see" the heat emissions of the Martian surface in high resolution—each pixel in a THEMIS image represents only 100 meters on the ground. But THEMIS

produces about five times more data than it can transmit back to Earth.

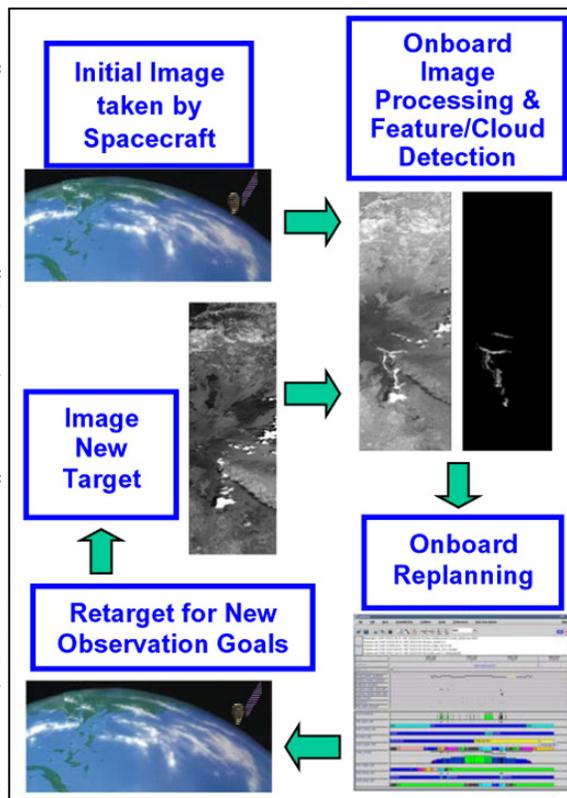
Scientists usually know ahead of time which THEMIS data they want to keep, but they can't plan ahead for unexpected events like lava flows. So Chien and his colleagues are customizing artificial intelligence software called ScienceCraft to empower THEMIS to identify important data on its own.

This decision-making ability of the ScienceCraft software was first tested in Earth orbit aboard a satellite called Earth Observing-1 by NASA's New Millennium Program. Earth Observing-1 had already completed its primary mission, and the ScienceCraft experiment was part of the New Millennium Program's Space Technology 6 mission.

On Odyssey, ScienceCraft will look for anomalous hotspots on the cold, night side of Mars and flag that data as important. "Then the satellite can look at it more closely on the next orbit," Chien explains.

Finding lava is considered a long shot, but since THEMIS is on all the time, "it makes sense to look," Chien says. Or better yet, have ScienceCraft look for you—it's the intelligent thing to do.

To learn more about the Autonomous ScienceCraft software and see an animation of how it



*Just as changing cloud patterns on Earth were identified using Earth Observing-1's Advanced Land Imager along with ScienceCraft software, the THEMIS instrument with ScienceCraft on the Mars Odyssey spacecraft can avoid trans-*

works, visit <http://ase.jpl.nasa.gov>.

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

## Bits & Pisces, Minutes of the September 28th General Meeting

### By Rick Tejera



A rare thing happened at the last meeting: The Polakis' were not there! Therefore I will attempt to fill in Jenn's shoes and provide the minutes.

The meeting was called to order at 1930 as usual. Per our custom we invited any guests to introduce themselves. One person did so and announced his intent to become a member. Welcome Darrell Spencer to the club.

Paul Dickson provided the treasurer's report. According to Paul, most of the transactions in September were for the 30th Anniversary Dinner, to be held the following day (More on that in this issue), and we still have money in the bank.

I then made the final announcement for the 30th Anniversary Dinner.

I then previewed the upcoming events. Of note was that the season to switch to a desert observing site is upon us, and since Flat Iron is no longer viable due to development, we need to finalize our selection of a new site. For the October Star Party, it was announced we'd head out to the Saddle mountain Site near Tonopah. November will find us at Dirt Road Blvd, near Arlington. After we compare notes we can then come to a consensus as to where will go moving forward. I segued to Jack Jones who announced the a Public Star Party at South Mountain on Oct 5th, Sponsored by the Phoenix Parks & Recreation Dept. Also on tap, Jack reminded everyone about the upcoming Thunderbird Starwatch at Thunderbird Park in Glendale on October 20th. Also we received an invitation to participate in the Alamo Lake Night Under the Stars. Alamo Lake is about 70 miles NW of Wickenburg, so It's a bit of a way's out fro a public event, but if you can go please let me know as we can set up a table during the day.

Next up, I read a letter I received from Tony Ortega. Tony wrote to us to ask if we would be inter-

ested in making a donation to memorial for Robert Burnham Jr., the author of Burnham's Celestial Handbook. The memorial will be paced on the grounds of Lowell Observatory. Matt Luttinen motioned a donation of \$100.00,. Before it could be voted on Paul Dickson motioned that we increase the donation to \$200.00. This was seconded by Gene Lucas and passed unanimously. For more information about the memorial, go to: [www.rbjm.org](http://www.rbjm.org) or <http://www.eastvalleyastronomy.org/rbjm.htm>. Wayne Johnson offered comments that the East Valley Astronomy Club got involved with the effort to help provide a non profit organization to assist with the handling of the collected funds. If all goes well the memorial will be constructed sometime next year. Claude Haynes, President of EVAC was in attendance and thanked the club for our generosity and extended an invitation to the All Arizona Star Party Oct 12th-13th.

On to Show & Tell: First up was Al Steiwing who had some pictures of the Rosette Nebula and Sun Halos

Paul Lind then showed us some photos from a recent trip to the UK where he Passed through the hamlet of Bath where William Herschel made his home. Of course he stopped in to say hello. Unfortunately Bill's been out for a while, but he did get some pictures of his house to show.

Whew finally, Break time.

After the break our main Speaker, our own AJ Crayon, gave a talk on Clusters. He used H-R Diagrams to show how clusters are categorized and how their ages and distances are determined, among other things.

After AJ's Talks and a few questions for him, a call was made for any last minute business. None was offered and the meeting adjourned.

I didn't count, but we did have a rather large turnout at J.B.'s for our traditional after meeting meeting.

# Call For Observations—Aquila

By A.J. Crayon

The constellation Aquila is called the Eagle by many but is, sometimes, named the Vulture. Its brightest star Altair forms the southern part of the Summer Triangle. In this constellation we find clusters, dark nebulae and planetary nebula.

## Barnard 133

**60mm, refractor, 17X;** Rick Tejera: Seen as a slightly ovate empty spot in the rich star field. Elongated slightly 1.5-1 in PA N-S.

**8" f6, Newtonian; 38X;** Charlie Whiting: I identified the 8<sup>th</sup> mag. double star, STF 2439 at the southwestern edge of the targeted FOV. I then identified the 9<sup>th</sup> mag star, SAO 143044 at the eastern edge. V843 Aquilae is parked just west of the target. Then I studied the pattern of the dim stars that are at the southeast and northwest of this dark nebula. I was positive that I was dead on target. I could see an absence of stars but I could not identify a shape or outline of the darkness. I guess I was expecting to see a billowy black cloud with form and texture. Oh well, it was fun anyway.

**8" f6, Dobsonian, 61X;** Rick Tejera: In the smaller field of the 8" the elongation is more noticeable and the shape is more defined. Noted a double star within a small grouping to SW. This turned out to be STF2439.

**18" f4.5, Dobsonian, 135X;** Dan Gruber: B 133 is very dark in a rich star field. It's elongated E - W about 15' and wider at the west end (8 - 9") than at the east end (6 - 7"). There may be a lobe on the NW side of the nebula extending slightly to the NE, which would explain the widening observed at the west end.

## NGC6755

Although it appeared to be a real object, it turns out that Cederblad 166 is thought to be non-existent. Well, no wonder no one reported a description for its observation!

**8" f6, Newtonian; 38X;** Charlie Whiting: I can see that there is an OC in the center of the FOV. Seen as a fairly dense collection of stars in a circle of 15' diameter. At **60X**, however, the surrounding field is very rich. So, it is difficult to tell where the OC ends. At **160X** I picked out about a dozen stars of 10<sup>th</sup> and 11<sup>th</sup> mag. I also saw detached clouds of nebulosity, which I assumed are unresolved stars. The view reminded me of looking through the branches of a tree. Czernik 39 is a separately designated OC within NGC 6755. Cz 39 seems to contain only 5 or 6 pretty dim stars in a small 5' diameter. I saw no sign of Cederblad 166.

**8" f6, Dobsonian, 61X;** Rick Tejera: Seen as a relatively large but sparse cluster. Noted grouping of stars to the southern edge of the cluster in a star or cross pattern some mottling suspected with averted vision. Noted Cz 39 in the northwest.

**10" F4.5 Dobsonian, 163X;** Dave Hofland: A rather large and bright ~15' diameter cluster of grainy haze with scores of resolvable stars, a little S shaped string of brighter stars traverses the central area of the cluster.

**14.5" f4.7, Dobsonian, 192X;** Paul Lind: large, 3 rich concentrations of stars forming overall V-shape. There appeared to be elongated dark nebulae, or lanes, on opposite

sides of cluster, about 1/2 degree apart, which may indicate presence of Cederblad 166 in the middle. Otherwise didn't see it.

**14.5" f5.2, Dobsonian, 200X;** AJ Crayon: this cluster is very unique as it has four, count them, four different groupings of stars; one at each of the cardinal compass directions with the distance between the northern and southern ones begin greater than the east and west ones. The southwest quadrant had 8 stars and were the brightest of all groups; northwest had 6 stars, the next brightest. The southeast had most stars with 15 immersed in a glow of unresolved ones. The northeast quadrant was the largest in area with 6 stars in a glow of unresolved stars. All in all this is a pretty unique cluster

**16" f4.4 Newtonian,** Rick Rotramel: OC - L, pB, pRich, about 70 stars, with a cluster group in the middle.

**18" f4.5, Dobsonian, 209X;** Dan Gruber: This open cluster seems to be in two sections. The southern section has 20+ m10+ stars in an E - W elongated area about 10' X 5'. The northern section is about 10' NE of the southern section. It has 10+ m10+ stars in a 5' circular area. An area with few stars separates the two sections, although there is a rather distinctive short chain of three m10 - 11 stars in this dark area. The northern section has a long chain of about 6 m10 stars extending SSE from it.

## NGC6756

**8" f6, Newtonian; 38X;** Charlie Whiting: I could just detect the tiny smudge that this object shows. The star field around it is pretty rich. At **60X** the OC more clearly takes shape. It is roundish. Some stars resolved to the south. At **180X** there were lots of tiny sparklers resolved. There is a knot of tightly packed and very dim stars to the NE.

**8" f6, Dobsonian, 61X;** Rick Tejera: Seen as a faint smudge of unresolved stars at the end of chain of three stars to the north of NGC 6755

**10" F4.5 Dobsonian, 163X;** Dave Hofland: small <5' diameter, loose collection of about a 20 resolvable stars with averted vision.

**14.5" f4.7, Dobsonian, 192X;** Paul Lind: NNE of 6755 about 0.5 deg., but much smaller. Has a very small concentration of stars within it.

**14.5" f5.2, Dobsonian, 220X;** AJ Crayon: small, pretty faint, not well resolved and contains about 15 stars from 12<sup>th</sup> mag on down. With averted vision it is larger and brighter. This is one of those small, faint and rich galactic star clusters that have become a favorite of mine!

**16" f4.4 Newtonian,** Rick Rotramel: OC - S, fB, fRich, about 15 stars, compressed in the middle.

**18" f4.5, Dobsonian, 460X;** Dan Gruber: This is a small, faint open cluster. There are about 10 m11 - 12 stars in a small semicircular area opening to the east. It is much fainter than nearby NGC 6755. This cluster is embedded in a nice triangle asterism of 10 or 11 m10 - 11 star whose apex points south.

*(Continued on page 5)*

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### NGC6760

**8" f6, Newtonian; 38X;** Charlie Whiting: is obvious in the middle of this low-power FOV as a gray smudge. To its west is a crooked line of 9th-, 8th-, and 9th-mag stars. To its southeast is SCJ 19 at 8<sup>th</sup> mag. Two sets of double-looking stars ride its southern boundary. At **60X** it is beginning to resemble a GC. At **160X** it has become apparent that this globular is not going to be resolved. But it is impressive anyway. It is an irregularly round cloud of nebulosity. It is about 2' in diameter. There's an 11<sup>th</sup> mag star just outside its northeastern edge. And several dimmer stars closely surrounding it.

**8" f/6. Dobsonian; 80x;** Rick Tejera: Seen as large and bright. Gradually brighter to the center with mottling throughout. Did not resolve many stars except near the edge.

**10" F4.5 Dobsonian, 163X;** Dave Hofland: ~3' diameter, round very slightly grainy spot of glow, brighter centrally but not stellar, fades gradually away quite consistently. Give a distinct distant impression.

**14.5" f4.7, Dobsonian, 192X;** Paul Lind: pretty large, pretty faint and not very bright in the middle as some GCs are.

**14.5" f5.2, Dobsonian, 440X;** AJ Crayon: is pretty big and pretty bright with 15 stars resolved in moments of good seeing. There is a star on the east side involved in the glow of unresolved and another to the Northwest just outside the glow.

**18" f4.5, Dobsonian, 460X;** Dan Gruber: A round, partially resolved globular cluster with a dense core about 5' in diameter. With averted vision about a half-dozen very faint (m12+) stars can be seen scattered across the core.

### NGC6803

**8" f6, Newtonian; 38X;** Charlie Whiting: this PN was almost undetectable. It was very small and very dim. At **60X** the view only improved marginally. It was just easier to confirm that something was there. At **180X** NGC6803 was pretty close to being stellar. It was only the slightness bit bloated. Round. It has a very faint tinge of blue color to it. A 12<sup>th</sup> mag star hangs around its southern edge.

**8" f/6. Dobsonian; 80x;** Rick Tejera: Seen as bright, suddenly brighter in the middle. Surrounded by ring of 6 stars, mostly to the north.

**10" F4.5 Dobsonian, 163X;** Dave Hofland: Very small, bright, stellar, looks like a mag 10 star in the eyepiece at this magnification, tried going up to **285X** but seeing won't allow it. Location verified by matching star geometry with the chart rendition of Skytools2, I note a small rectangular asterism to the E side of the field. I knew I was looking right at it but . . . was I really? So I tried a trick I read about in an old 2002 column by Doug Scobel in "Reflections" that I found on-line, a newsletter of the University Lowell Astronomers. Once location is confirmed, use an OIII filter and pass it between the eye and the eyepiece while observing being careful not to move out of the focal plane. All of the stars should dim but not the planetary nebula. It worked! The field stars either dimmed or disappeared but NGC 6803 was virtually unaffected. Thanks Doug!

**18" f4.5, Dobsonian, 460X;** Dan Gruber: Although I couldn't definitively identify this object, I think I got it based on both observation and later comparison with photos of the nearby

star field. This very small planetary appears almost stellar and quite bright (maybe m10), except that it can't be focused to a point when using a UHC or OIII filter. No features were discernible.

### NGC6804

**8" f6, Newtonian; 38X;** Charlie Whiting: I could just barely tell that something was there midway between two 9<sup>th</sup> mag stars. 7<sup>th</sup> mag BU 796 was standing nearby brightly shining to the NE. At **60X** I could see that there is an extended object there, but it is still too small and dim to appreciate it. At **180X** I could see an oblong smudge. It looked like it has some texture. No donut-hole. There are two very dim stars to the NE. One of them is just inside of the edge of the PN's halo.

**8" f/6. Dobsonian; 80x;** Rick Tejera: Seen as smaller than NGC 6803, although shows in SkyMap as slightly larger. Almost stellar. An arc of 4 stars curves and points right to it. Using the O-III brought out a bit of halo around the stellar center

**10" F4.5 Dobsonian, 163X;** Dave Hofland: At **46x** a tiny spot of dim glow ~15' SW of 7<sup>th</sup> mag star that is the end of an ~1° long line of conspicuous stars that feeds into the FOV from the N. At **163x** ~<1' diameter spot of glow visible direct but averted vision much better. Rather smooth homogenous glow, no texture noted, faint, but with averted vision its edges are rather clearly defined.

**18" f4.5, Dobsonian, 329X;** Dan Gruber: This planetary is about 1' across and slightly oblate E - W using a UHC filter. There are 3 or 4 very faint m12+ stars extending across the disk in an N - S direction.

### Barnard 142 and Barnard 143

**8" f6, Newtonian; 38X;** Charlie Whiting: I tried to detect this dark nebula with the 9x50mm finder scope, but was not able to make it out. At **38X** in the 8" F6 Newtonian, it was easy to identify the 8<sup>th</sup> mag star, STF 2558, which sits in the middle of the darkest portions of B142. I could see that there was definitely something black to the north, east and west of STF 2558. The largest part is north. The smallest is east.

**8" f/6. Dobsonian; 60x;** Rick Tejera: Seen as crescent shaped dark area in star field aligned N-S concave to the West. The Southern end was wider and showed more of a roundness that did the northern end, which hooked sharply to the west. These two protrusions are obviously the upper and lower ends of Barnard's "E". Could not discern and definitive area that could be called the middle of the "E"

**10" F4.5 Dobsonian, 35X;** Dave Hofland: ~1° W of  $\gamma$  Aquilae (Tarazed) at **35x** both seen as large irregular very dark regions absent of stars. **B142** ~60' long and winds roughly e-w more or less ~ 15' wide. **B143** is NE of B-142, ~"C" shaped, with a wide peninsula of stars intruding from the NW. Although both areas of dark nebulae were observed the 2° 33mm SWAN field of view just not quite enough to get the whole "E" in sight. Tried binoculars with no luck either. Our observing location for this night located rather close to a small town with a lot of sky glow so contrast in the binoculars was not very good.

**18" f4.5, Dobsonian, 74X;** Dan Gruber: **B142** has an irregular shape elongated about 40' X 30' E - W. There are some stars superimposed across the dark area, notably at **135X** two parallel lines of about 5 m10 - 11 stars each running NE - SW

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## President's Corner

### By Rick Tejera



Well, the 30th Anniversary Dinner has come & gone, as mentioned earlier we had a very successful evening, with a lot of good company, food and conversation. For me the highlight of the evening was presenting the President's Awards.

I had decided a while back to present these awards at the dinner. My criteria was pretty straight forward: I chose members who have made a lasting & positive contribution to the success of the Saguaro Astronomy Club. I'm certain that I could have presented many more awards, But I imposed a 5 award limit. Anyway the recipients were:

- ★ **Jack Jones:** For his tireless work in organizing Public Events & Academic Outreach. Also recognized for his assistance in ensuring the "Comfort" of club members at club events.
- ★ **Steve Dodder:** For his work to preserve the Pierre Schwaar Binocular Chair, the legacy of a treasured member, whose contributions to the Club & astronomy community will now live on.
- ★ **Steve Coe:** For sharing his knowledge and experience with those who want to learn about the wonders of the night sky.
- ★ **A.J. Crayon:** For his tireless work in making the All

Arizona Messier Marathon the premier event of it's kind in the world. And for his efforts organizing & maintaining the Deep Sky Observing Awards

- ★ **Gene A. Lucas (17250):** As a Charter Member who continued leadership & enthusiasm has been an integral part of the Saguaro Astronomy Club for 30 Years

After presenting Gene with his award, I told him that back in July, the membership voted unanimously to extend him an Honorary Lifetime membership in return for all he's done for the club. For the first time I can remember Gene was speechless.

It has been my pleasure to have been a part of this club for the past 11 years. I doubt I'd enjoy astronomy as much or even wonder if I would have pursued the hobby with the passion I have now if not for camaraderie and friendship of the club. I've made some very good friends and have become a much better observer because of the people I've met in the club.

As we near the holiday's it's time to start thinking about our Holiday Party. If you'd be willing to put up with us for a night, please let me know what dates would work for you.

## Monthly Trivia Question

Which man came the closest to the moon without landing on it? (hint, It's not Jim Lovell)

Last Months Answer: Name the only two astronauts who flew the X-15.

Neil Armstrong and Joe Engle. I'm going to go out on a limb and guess most of you guessed Armstrong, but how many guessed Engle? Engle flew 3 X-15 Flights (138, 143 & 153). He was selected as an astronaut in 1966. He served as back up LM pilot on Apollo 14 and was scheduled to be the LM pilot on Apollo 17, but was bumped from the flight in favor of Harrison (Jack) Schmidt. Schmidt had been scheduled to be LM pilot on Apollo 18, but when that was canceled he was moved to 17 under pressure from the scientific community, who wanted a true scientist on the moon. Engle would later

go on the command one of two crews assigned to the Space Shuttle test bed Enterprise for atmospheric landing tests. He was backup commander for STS-1 and Commanded STS-2 & later STS- 51-1

Armstrong made 7 flights in the X-15. He was commander of Gemini VIII which accomplished the first hard Docking of two spacecraft. The mission almost ended in disaster, however when thinking the Agena target vehicle's thrusters were causing a yawing motion, the crew undocked. It was actually a thruster on their own spacecraft causing the problem. Once free of the Agena the Gemini VIII capsule began to gyrate wildly. Armstrong was able to regain control, but not before using his reentry thrusters and coming perilously close to blacking out from the G-forces. The mission had to be aborted at that point. I hope don't have to tell you about Apollo 11 ;)

# December 2007

SUN	MON	TUE	WED	THU	FRI	SAT
						1 ☾ SAC Star Party, Site TBA.
2	3	4	5	6	7	8 DOTM Star Party, Antennas
9 ●	10	11	12	13	14	15
16	17 ☽	18	19	20	21 Winter Solstice at 2307mst	22
23 ○	24	25	26	27	28	29
30	31 ☾					

## Schedule of Events for December 2007

Dec. 1st	Moon at 3rd Quarter at 0544mst.
Dec. 1st	SAC Star Party Site TBA, Sunset 1723 End Ast. Twilight 1851, Moonrise 0057.
Dec. 8th	DOTM Star Party at the Antennas Site, Sunset: 1726, Ast. Twilight Ends 18:55, Ast. Twilight Begins 0558
Dec. 9th	Moon is new at 1040mst.
Dec. 17th	Moon at first Quarter at 0317mst
Dec. 21st	Winter Solstice at 2307mst
Dec. 23th	Moon is full at 1815mst.
Dec. 31st	Moon at Last Quarter at 0051mst

## 30th Anniversary Dinner Photo Gallery



*From Left to Right: Sue Tejera, President Rick Tejera, Lindsay Tejera, Pauline Davies, Dr. Paul Davies, Secretary Jennifer Polakis, Properties Manger Tom Polakis*

*The Presidents Award Recipients:  
From Left to Right: Rosie Dodder  
(Holding Jack Jones Award),  
Steve Dodder, Gene Lucas, Steve  
Coe, A.J. Crayon, President Rick  
Tejera*



# Table Photo's



## Dirt Road Blvd Observing Site Directions



Go straight through the three way intersection and the highway bends sharply right, get in the right lane. In 0.7 mi is a sign that directs you toward Arlington, Az. Turn right at the sign, it is before the wide bridge over the Hassayampa River. You will immediately notice a sign that says "Old U.S. Hwy 80". Stay on Old Hwy 80 for about 12 miles, along the way are two stop signs, take a left at the first and a right at the second, staying on Old Hwy 80, traveling west. After you pass the Arlington Post Office and the Desert Rose Bar and Grill is a sign for Aqua Caliente road, it is a right turn. On the left side of the highway is an abandoned cotton gin. Turn right onto

Aqua Caliente road and zero your odometer at this point. Turn right again onto a dirt road that is 0.6 miles from the turnoff. At 2.8 miles you will pass under a set of power lines. At 5.3 miles there is a cattle guard. At 5.5 miles is a yellow sign to warn you that the road turns right, but don't go that direction. Take a left at the fork in the road and you will be on the "Dirt Boulevard". It is a very wide dirt road, actually two of them, with a median strip in the middle. At 6.0 miles there is a very large desert pavement on the right. It is a large, pretty flat area of dark rocks. That is it, turn right off the Dirt Boulevard and set up your scope.

(Continued from page 5)

across the eastern portion of the nebula. **B143** is large dark nebula is very close to B142. It is large, extending about 60' X 40', N - S in a flattened V - shape with one arm of the V pointing SW and the other pointing NW.

### Call for Observations

For December Sculptor is our choice. Star parties from desert vistas for the remainder of the year will have good southern horizons making the selection a good choice. Let's see what is in the often overlooked area of the fall sky. From a list of about 40 of the brighter objects, all but two are galaxies, so we have enough for return visits. For our first visit check out **NGC7793** to which the NGC Description says, "Like a comet (1850)". Since this is a late spiral we should expect to see more than its elongation. Next is the large, scattered open cluster **Blanco 1**, also called the  $\zeta$  Sculptoris cluster, located at R.A. 00h 04.3m Dec -29° 56'. Low powers and wide field telescopes will do a good job on this cluster that is about 90'. Moving on we go to the magnificent galaxy **NGC 253**. This galaxy and the next object, the globular cluster **NGC 288** is on the Herschel 400 list. Would you characterize it loose, tight or in-between? The **Sculptor Dwarf** will be a challenge object and will need clear, steady and transparent skies. It is located at R.A. 00h 59.9m Dec -33° 43'. Don't let its surface brightness of 17<sup>th</sup> magnitude scare

you off. Pan around this area looking for a change in the background brightness. If you can see any stars in this galaxy please, by all means, call me over. Last will be the barred spiral, and also a member of the Herschel 400, **NGC 613**.

There is much left to do in Cassiopeia, so let's not wait any longer for this one as there are more than 60 objects well within reach of many SAC scopes. First give **M52** a try as it was skipped last time around. Then just 40' northwest is the asterism on the SAC list titled **Airplane** or **Arrow** and is located at RA 23h 20.0m Dec +62° 20". It is pretty large, so use low power, and bright. What does it look like to you? Don't worry if it doesn't look like either, let us know anyway. Getting away from the NGC give the open cluster **Berkley 4** a try, it is reported to have 25 stars in 5'. Do you agree? The next 3 clusters are on the Herschel 400 list. About 1° 30' northeast of  $\gamma$  Cassiopeia is **NGC381**, a compressed cluster. The next cluster is **NGC436**, has about 30 stars in a 5' area and is located 1° 48' southwest from  $\delta$  Cassiopeia. Three degrees east and a little south of Segin,  $\epsilon$  Cassiopeia, is **NGC559**. Does it seem pretty large to your eye? **Stock 2** has over 150 stars in a 60' area and is north of the Double Cluster. Enjoy these clusters; before you know it spring and galaxies will be upon us.

## 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: \_\_\_\_\_

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

Address: \_\_\_\_\_

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

City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

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

E-Mail: \_\_\_\_\_

### 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 you prefer a printed copy.

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

# SAGUARO ASTRONOMY CLUB

November 2007

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*Videmus Stellae*



## 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	<b>November 16th, 2007</b>
June 1st, 2007	December, 2007
June 29th, 2007	Holiday Party-TBA

### 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
<b>Nov 3rd, 2007</b>	<b>1737</b>	<b>1902</b>	<b>0207</b>	<b>D</b>
Dec 1st, 2007	1723	1851	0057	T

### Future Planning

June 15th-16th, 2007	5 Mile Meadow Star Party
Sept. 29th, 2007	SAC 30th Anniversary Celebration Dinner
<b>November 9th-10th, 2007</b>	<b>Sentinel Schwaar Stargaze</b>

F= Flat Iron; C= Cherry Road; Dirt Road Blvd; T= TBA