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Inside This Issue

<i>In Memorium-Earl Timmerman</i>	1
<i>NASA's Space Place-Solar Sails</i>	2
<i>Contributing to SACnews</i>	3
<i>Last Call For Observations-Cameleopardalis</i>	4
<i>President's Message</i>	6
<i>Calendar of Events</i>	7
<i>Thunderbird Stargaze</i>	8
<i>Bits & Pisces-Minutes from the February General Meeting.</i>	9
<i>Member Services</i>	10-11

In Memorium: Earl Timmerman

By Rick Woods

Earl passed away suddenly on Feb. 4th while out hiking.

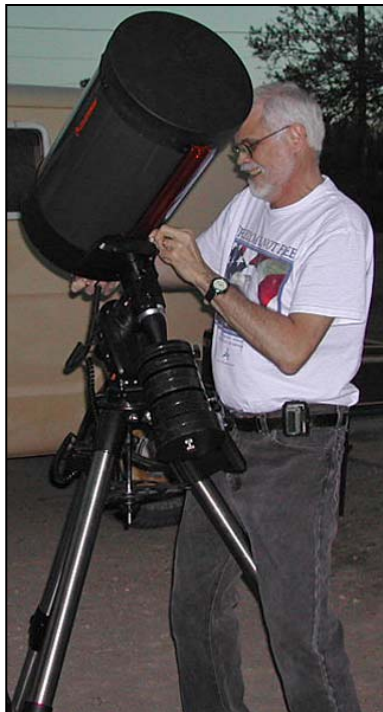
Earl was an active member of the SAC many years ago, and had a couple of Pierre Schwaar telescopes. During that time, he photographed the entire Messier catalog the hard way: on film, hand-guiding his telescope. His album was beautiful. But, time went on and he drifted out of the hobby for various reasons.

We started working together at the State of Arizona in early 2001, and quickly gravitated together when we discovered our mutual love of astronomy.

In 2003, I got a new telescope, and we started having a monthly observing night at my house out in Black Canyon City. This prompted Earl to join the SAC again. At first he was lugging his Pierre telescope out and fighting with it, but after a little while of that, he broke down and bought himself a nice go-to C11 which he really liked. Our observing group grew to three regulars (Earl, myself, and our friend Scott with his refractor), with the occasional large crowd of friends showing up, making it a party. Earl was a walking encyclopedia on almost any topic, and loved showing people the view in his scope while talking extensively about the object being viewed.

Everyone loved that about him.

Earl often spoke fondly of the SAC. More than once he mentioned AJ and what a maniac observer he is. He had just turned 60 a couple of months ago, and was looking forward to his retirement in a few years. There was no clue that this was going to happen; he seemed the picture of health until being struck down by a heart attack without warning.



Earl is sorely missed by everyone here at work, and by us, his observing buddies. Several of us have pitched in and had a star named for him. I know many people don't approve of this practice. Personally, I feel differently. It's a gesture of love and respect for Earl from us to his widow Marilyn, and seems appropriate to us. We're hanging a copy of the certificate in my observatory up in BCC.

I hope there are enough of you there at SAC who knew Earl that his loss will be felt there as well. A very good man has left us, and the world is the poorer for it. God-speed, my friend.

(President's Note: On behalf of the Saguaro Astronomy Club, Please extend your thoughts & sympathies to Earl's family & friends. Rick)



Even Solar Sails Need a Mast

by Patrick L. Barry

Like the explorers of centuries past who set sail for new lands, humans may someday sail across deep space to visit other stars. Only it won't be wind pushing their sails, but the slight pressure of sunlight.

Solar sails, as they're called, hold great promise for providing propulsion in space without the need for heavy propellant. But building a solar sail will be hard; to make the most of sunlight's tiny push, the sail must be as large as several football fields, yet weigh next to nothing. Creating a super-lightweight material for the sail itself is tricky enough, but how do you build a "mast" for that sail that's equally light and strong?

Enter SAILMAST, a program to build and test-fly a mast light enough for future solar sails. With support from NASA's In-Space Propulsion Program to mature the technology and perform ground demonstrator tests, SAILMAST's engineers were ready to produce a truss suitable for validation in space that's 40 meters (about 130 feet) long, yet weighs only 1.4 kilograms (about 3 pounds)!

In spite of its light weight, this truss is surprisingly rigid. "It's a revelation when people come in and actually play with one of the demo versions—it's like, whoa, this is really strong!" says Michael McEachen, principal investigator for SAILMAST at ATK Space Systems in Goleta, California.

SAILMAST will fly aboard NASA's Space Technology 8 (ST8) mission, scheduled to launch in February 2009. The mission is part of NASA's New Millennium Program, which flight tests cutting-edge technologies

so that they can be used reliably for future space exploration. While actually flying to nearby stars is probably decades away, solar sails may come in handy close to home. Engineers are eyeing this technology for "solar sentinels," spacecraft that orbit the Sun to provide early warning of solar flares.

Once in space, ST8 will slowly deploy SAILMAST by uncoiling it. The truss consists of three very thin, 40-meter-long rods connected by short cross-members. The engineers used high-strength graphite for these structural members so that they could make them very thin and light.

The key question is how straight SAILMAST will be after it deploys in space. The smaller the curve of the mast the more load it can support. "That's really why we need to fly it in space, to see how straight it is when it's floating weightlessly," McEachen says.

It's an important step toward building a sail for the space-mariners of the future.



SAILMAST is the thin triangular truss in front of the picture. It is attached to a section of a silver foil solar sail section shown here in a laboratory test. The mast in the picture is 2m (6 ft) long. The Space Technology 8 mission will test the SAILMAST, which is 20 times longer.

Find out more about SAILMAST at nmp.nasa.gov/st8. Kids can visit spaceplace.nasa.gov/en/kids/st8/sailmast to see how SAILMAST is like a Slinky® toy in space.

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

Contributing to *SACnews*

By Rick Tejera

Articles

Articles for SACnews should be submitted either in ASCII Text format (*.txt) or Microsoft Word (*.doc) formats. If you sent it in Word, please help me with the formatting. Use full justification and 12 point type, I use Swis 721 BT font, if you have it available, use it. It will save me time in changing it later. Try to keep article to about two pages, including table's, photos or diagrams. Please spell-check your documents. Although I'll run spell check sometimes a typo will get through.

Tables and Ephemeric's'

If you have a table of astronomical information, such as ephemeris, please try to arrange it in Microsoft Excel. If the table is part of an article you should be able to embed the excel file into word. If you do not have access to excel, any spreadsheet program would do, or you could use the table function in Word. As a last resort, try to type the table as clearly as possible with enough space between entries that my scanner will recognize it as a table. I'll scan the information and convert it. Include information where the table is to be placed in the article if it is not obvious. Keep in mind this can take me some time to do and may delay publication. If your information is time sensitive, try to give me as much lead-time as possible.

Photographs

Keep in mind the limitations on what I can do with pictures. Astrophoto's will probably not print well unless they are of the moon. For best results, pictures should have good contrast and a moderately light background. I can work with most picture and graphic file formats, but prefer JPEG, particularly if you're sending me the picture via e-mail. I can scan

prints, but once again give me plenty of lead time and include a SASE for return of the original, or contact me to find out what meeting or star party we'll both be at so I can return the original.

Deadlines & Contact Info

I try to have the newsletter ready for posting to the web by the beginning of the month. Given that, I need to have material to me the week before. Since A.j has to sort through the contributions to his column and then Send the finished product to me, Observations for Last Call should be sent to A.J. the 2 weeks prior to the end of the month. Submissions after this date may not make it into that particular issue. Keep in mind that currently, the newsletter is 12 pages. Of this 7 pages are reserved for regular features. I will do my best to get your submissions published as soon as practical, but space constraints may delay publication. If you have any questions regarding suitability and format of something you'd like to submit, contact me at the following numbers and address:

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SACnews Submission Deadlines

Meeting	Deadline	Meeting	Deadline
April	March 30th	September	August 24th
May	April 27th	October	September 28th
June	May 25th	November	October 26th
July	June 29th	December	November 23rd
August	July 27th	January 08	December 28th

Call For Observations— Cameleopardalis

By A.J. Crayon

Camelopardalis, the giraffe, is a circumpolar constellation for most of us. It doesn't have many bright stars to make its identification easy, but with a reasonably dark site and a star chart it should be easily identified. It is in the southeastern corner of the Milky Way and its size is pretty large. Petrus Kaerius, a Dutch astronomical globe-maker, first invented it in 1613. This constellation wasn't accepted until it appeared in a 1624 book by Jakob Bartsch, who was a son-in-law of Johannes Kepler.

The weather wasn't too good to us for Camelopardalis and the submitted observations were rather sparse. Regardless, there are still a good number of deep sky objects to come back to. Perhaps we will re-visit some of these, hoping for better results.

Stock 23, aka Pazmino's Cluster

This cluster has about 25 stars in a 15' area it is located at RA 03 16.2 dec. +60 06.

8" f6, Newtonian, 38X; Charlie Whiting: In my **9X50** finder scope it is 2° in diameter, this OC is too large for the 8" telescope. And, since the brightest members are 5th and 6th mag stars, this is a good object for the finder scope. Especially since I can just dial the coordinates into the GoTo mount. This object might also be good for binoculars but would be tricky to find in Camelopardalis. In the < 6° field of the **9x50** finder scope there are 11 fairly bright stars (5th to 7th mag) and another 9 dim stars (8th mag) visible. Eight of the bright stars are in the inner half of the field. I used the coordinates in Brent Archinal book, "Star Clusters". The center of Archinal field is a little more than 1° NNE to NE of the SAC data coordinates listed in Skymap. The two fields overlap. There are more bright stars in Archinal field than SAC's. Observed in Glendale. In the 8" it is a nice OC of bright stars. The centerpiece is a group of stars that form a pentangle shaped like a Cape Cod house. And there's a string of stars curving up and away from the rooftop as though there was a fireplace burning inside the house. About 15 stars seem to belong to this cluster if I

include all within a 30' circle. Observed from Glendale. (OK, incase you are wondering - a pentangle has a pentagon shape; it also represents a British folk-rock band, circa 1960 - 1970. aj.)

Collinder 464

This cluster is located at RA 05 12.6 dec. +73 58, with 50 stars in a 120' area. Compare and contrast with Stock 23.

No observations submitted.

NGC2403

This is a magnificent spiral galaxy. This galaxy is in the M81 galaxy group, has well resolved irregular arms and a broad bar. If you didn't get to see this you should keep it on your must see list for another season.

8" f/6, Newtonian, 71x; Rick Tejera: Very Large & very Bright, elongated about 2-1 NW-SE. Two bright stars at either end along major axis, probably foreground stars. Could see part of arm structure to the east. This is a very nice object.

16" f4.4 Newtonian, 90x; Rick Rotramel: G - L, B, oval spiral, with much brighter large oblong nucleus, arms on both sides show well. There are 3 bright foreground stars across the galaxy, with one just outside of the nucleus. Very nice!

8" f6, Newtonian, 80X to 120X; AJ Crayon: There is so much detail in this galaxy it is difficult to describe. At **80X** it is just another oval galaxy, but increasing the power brings out magnificent detail and the following is a combination of several observations from **100X to 120X**. This is a very bright, very large at almost 1/2 the field of view, elongated galaxy in a southeastern position. It has a brighter elongated middle that is very bright and contains HII regions and four stars from 8th to 10th mag. With averted vision and moments of good seeing there is a spiral arm from the north-curving counter clockwise to the southeast. There is another faint spiral arm to south.

10" f4.5, Dobsonian; Ken Reeves: Here is a great galaxy that is better than most Messier Galaxies.

(Continued on page 5)

(Continued from page 4)

It is very large, pretty bright, has a very-very large faint halo with a somewhat brighter middle. The galaxy is very elongated northwest/southeast. There is a stellar nucleus or perhaps a foreground star, and 2 more stars bordering the bright middle. Averted vision and moving the scope really makes the halo grow. The halo fills $\frac{3}{4}$ of the field of view (about 25'). The middle is definitely mottled, I tried using the UHC filter to bring out hydrogen regions, but wasn't able to see any more.

14.5" f5.2 Dobsonian, 140X; AJ Crayon: fairly large, quite elongated in a southeasterly position, gradually brighter middle, with a suddenly much brighter nucleus. There are two stars embedded at each end and several fainter ones involved. This galaxy deserves another look on a better night while on the central meridian! You just gotta see the spiral arms and bar.

MCG +13-07-007

Now the toughest of the lot is from the Morphological Catalog of Galaxies, where the SAC database indicates its *inner regions are very black*. You probably won't be able to see this because this galaxy is 12th magnitude and less than 1'. It is located at RA 08 53.2 dec. +76 30. Think of it this way – now you've seen something in the MCG!

No observations submitted.

NGC2655

This barred spiral is bright and large; see what details this one has for us.

8" f/6, Newtonian, 71x; Rick Tejera: Noted as large and bright very brighter to the middle, stellar like core. Possible slightly elongated E-W. Next to a chain of five stars in a straight line running E-W to the south. **NGC2653** is a star in the same field to the north.

16" f4.4 Newtonian, 90x; Rick Rotramel: G - fL, B, oval spiral, very much brighter dense nucleus, arms each side show pretty well.

8" f6, Newtonian, 100X; AJ Crayon: This galaxy is about 5'X4' and 11th mag is a little elongated and has a brighter elongated middle. It is almost between two 7th mag stars.

10" f4.5, Dobsonian; Ken Reeves: is somewhat

bright, somewhat small, a little brighter in the middle, contains a non-stellar nucleus, and is round. The galaxy is between 2 fairly bright stars that interfere somewhat with the viewing. The halo is pretty faint, but averted vision helps. There is a nice star pattern is around this object.

NGC2715

This is another barred spiral, not quite as bright as the previous one but elongated. No observations submitted.

IC 3568

This is a surprising planetary nebula with a magnitude 12.9 central star. I have no record of color being detected. Do you see any?

8" f6, Newtonian, 60X; AJ Crayon: this planetary nebula is about 10", 11th mag and featureless. Its central star was not seen.

Call for Observations

Three years ago we did Auriga and it is about time for a second visit to scoop up what is still waiting for us. Mostly open clusters are found here, but that isn't all; so we will confine our selection to mostly open clusters and a couple of nebulae. First let's start with the large bright open cluster **NGC1664**. Next another open cluster is **Collinder 62**. Our third open cluster, another bright one, is **NGC1893** and includes the nebula **IC 410**; both of these are in the Auriga OB2 association. Now try the asterism **NGC1896** that has stars from 9th to 12th mag, how many do you see? We saved **M36** for this time so give it a good long observation. Our next selection, **Barnard 34**, is 2° southeast from M36. Normally we think of dark nebula during the summer time, but that isn't only when they are available. This one was seen in my old 8" Newtonian and its 20' should be easy at low powers. Our final selection is **NGC2126** another open cluster that has about 20 fairly faint stars scattered about. What do you see here?

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

(Continued on page 8)

President's Corner

By Rick Tejera



Well, the Messier Marathon is almost here. Hope you're ready. Even though 110 doesn't look doable, it's still a great event and a good chance to catch up with old friends and make a few new ones. Mark the date: March 17th.

For those of you who try to contact me through either the Newsletter@saguaroastro.org or President@saguaroastro.org email addresses, let me ask you to use my regular email account: saguaroastro@cox.net. The reason is simple, I don't check those addresses as often as I do my main account. Also I've found that replies through the Go Daddy Webmail system don't always go through. Don't know why, but that's the way it is. My main goal for those addresses is for folks looking for information on the club or other forms outside the club to have a single point of contact. Beyond that, I'd just prefer you send your message directly to me on my cox account. I really don't mind.

Matt Luttinen, Steve Perry & I made it our goal to the Saddle Mountain (Gasline) Site that is being considered as a replacement for Flatiron. We agreed this site has potential. As pointed out by the Polaki, & others there are no stray lights and the skies to the south & west are quite dark. We saw zodiacal light up to the Pleiades. The only issue we had was that lights from west bound vehicle on Dobbins rd do light up the field. Maybe a little more scouting further west will put this problem to bed. Dirt Rd Blvd, near Arlington is still in the running. I haven't had a chance to get there yet, hopefully soon. Matt, Steve & I mused at the fact that if this is the biggest problem we have, we are indeed a lucky bunch of astronomers.

Looks like Jack is getting the 30th anniversary T-Shirts & Polo's ready. Hopefully he'll have them available for the March meeting. We still need to make some decision on the 30th anniversary dinner. Jenn got some info from the Challenger Science Center in Peoria. Probably a bit out of our price range but we can talk about it at the next board meeting (Scheduled for March 2nd) > PLEASE, PLEASE give us your input on this. Any ideas are welcome. If you can't make the board meeting, you know how to get a hold of me.

I was checking the website for something and noticed that April 21st has been added for the Spring edition of the Thunderbird Starwatch in Thunderbird park in Glendale. This is our premier outreach event and always draws a big crowd, so plan on bringing your scopes out in force.

To help encourage submission of articles to the NL I've rerun an old article on submission guidelines. Some of you have probably seen it before, but we have enough new blood to make a reprint worthwhile. Any questions, just ask.

Paul Dickson has advised that as of 16 Feb, 2007, 65% of the membership has renewed. Please make Paul very busy at the march meeting and renew your membership. This will be your last issue otherwise. Also, it will also be your last reminder.

Let's hope Meteora looks upon us with favor the next few months so we can catch up on our observing lists.

Clear Skies
Rick



Monthly Trivia Question

Who's initials are drawn in the lunar soil?

Answer to last month's question: 5000 years from now, in what constellation will the South Celestial pole reside? In the year 7007 the earth will have precessed so that the south celestial pole resides in Carina. The 3rd magni-

tude star ν Car will be only 1 Deg 12' from the pole, while the north Celestial pole will be in Cepheus. α Cep, 13 deg 30" from the pole will be the nearest bright star. So it'll only take 5000 years for our mates in Australia to enjoy polar alignment!

April 2007

SUN	MON	TUE	WED	THU	FRI	SAT
1	2 ○	3	4	5	6 SAC Meeting, GCU 1930	7
8	9	10 ☾	11	12	13	14 SAC Star Party, Flat Iron
15	16	17 ●	18	19	20	21
22	23 ☽	24	25	26	27	28
29	30					

Schedule of Events for April 2007

Apr. 2nd	Moon is Full at 1015 mst.
Apr. 6th	SAC General Meeting at Grand Canyon University at 1930, Speaker: TBA
Apr. 10th	Moon at 3rd Quarter at 1104 mst.
April 14th	Stonehaven Potluck at Stonehaven Observatory (aka Steve & Rosie Dodder's). Directions are on Page 10 in the member services area.
Apr. 14th	SAC Star Party at Flat Iron, Sunset 19015, End Ast. Twilight 2029, Moonrise 0447.
Apr. 17th	Moon is new at 0436 mst.
Apr. 23rd	Moon at first Quarter at 2336mst

Future Planning

June 15th-16th	Five mile Meadow Star Party, Near Happy Jack
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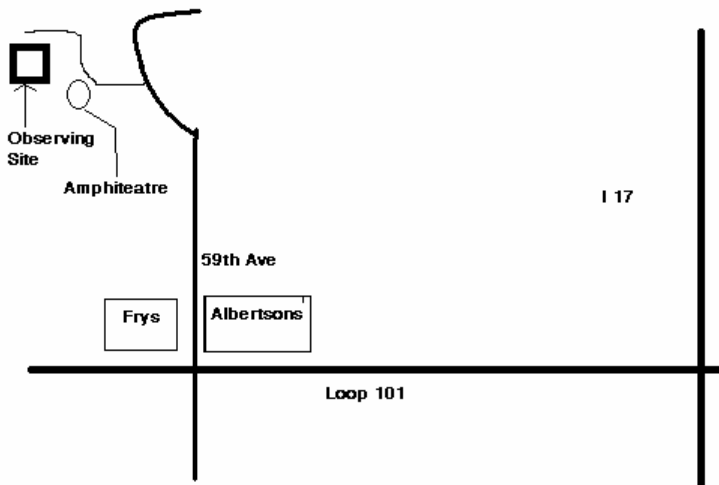
Spring Thunderbird Starwatch

When: Saturday April 21st, 2007

Where: Thunderbird Park, Glendale

When: 1900 (7:00p.m.), Setup Begins 1800 (6:00 p.m.)

It's that time of year again, folks. Get your cope ready and help show the skies to an appreciative public. As you know this is always a big event with a large turnout, so the more folks we get the better the event will be.



Getting There: Take Loop 101 to 59th Ave. Head North on 59th Ave (right if you coming from the East, Left if your coming from the west). Continue past Deer Valley Rd. (about 1 mile). 4/10 of a mile beyond Deer Valley, turn left into the park. Go right, past the amphitheatre and follow the road to the observing field. Ranger will be there to direct you if you've never been there.

There will be porta potties available.

(Continued from page 5)

than 13th mag – we have a lot of work to do here. First up is **M48** and should be well known 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 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.

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

By Jennifer Polakis, SAC Secretary

We headed out to the meeting with a glorious view of Venus and Mercury shining into the windshield and were greeted by a just past full vovlvb (very orange very low very beautiful) Moon at the corner of I-17 and Camelback. I took this as an omen for another great year of observing for all of us groundhog astronomers.

Fifty three were present including 3 guests and our speaker Jeremy Perez, his lovely wife, extremely well behaved kids, and his Dad. One of the guests was a blast from the past, a former member and past president, Jerry Maurer. AJ said the first time he had met him was at McDowell Mountain Park January 1980!

Paul Lind, VP opened the meeting in President Telrad's absence. Despite being gavel-less he finally got us settled down into the usual routine.

Paul Dickson, Treasurer gave renewal stats and a call to renew your membership if you haven't yet.

Paul, VP announced the next regular meeting is March 2nd, and the next star party is Flatiron Feb. 10th.

Jack Jones, Public Events Guy announced the next Thunderbird Park Star Party will be Sat. April 21st. There will be shuttle buses from 7-10 pm for the public. He suggests you get there ~6:00 to set up. He also re-introduced our loaner scopes--They're clean and collimated so get them while they are! The Pierre scope just got a new Telrad! Jack is also taking orders for the new 30th anniversary SAC T Shirts.

A. J. Crayon gave information and notices on the Messier Marathon--March 17th AZ City Site; Sunset 6:40 M74 very low in the West @ sunset near to 11th Mag Comet Enke, 109 objects possible with M30 being impossible. Set your own goals have fun certificate for 50+ and 1st, 2nd, 3rd place telescope plaques. Please sign a waiver if you haven't yet.

Show & Tells:

Steve and Rosie Dodder showed the status of the nearly completely refurbished Pierre Bino-chair--new alt bearing new az box-took completely apart and cleaned, poured a pad at Stone Haven, new counter balance solu-

tion to change center of mass to correct area in the works--CAD drawing showed, robusted the OTA w/ new birch veneer. Help and advice came from Gene Lucas, Rick Rotramel, Sam Cardinal (raise the bearing idea guy) and Matt Luttinen. There will be a potluck/observing party at Stone Haven on April 14th--bring a chair, something to grill and a side dish to share, just don't get any BBQ sauce on that Bino Chair!



Jeremy Perez, Our Speaker for February

Al Stewing assembled his newly manufactured Couch Potato chair while we looked on. It is a basically a lawn chair on a lazy-susan with a binocular holder. He bought the plans for it from Sim Picheloup for ~\$15 and put \$75 into parts for it. You can buy plans, plans & part kit, or entire assembled chair at <http://www.geocities.com/lwraif/SimP/index.htm>

Steve Coe passed a get well card for David Levy.

Steve Coe found some new observing spots-if you get to them please comment on the SAC Forum. He also has copies of both of his books for sale: "Deep Sky Observing, The Astronomical Tourist" \$30, and "Nebulae and How to Observe Them" \$35.

Steve Coe showed a medley of published photos of the spectacular Comet McNaught that graced our skies early January. Congratulation Rob! It was a beaut!

Which finally gets us to Paul Lind's introduction of our speaker, Jeremy Perez, who spoke on "Sketching the Deep Sky". He taught us how and why, had some great red-flashlight ideas, suggested drawing tools and materials and showed some great works that he has done. He co-authored a book on astronomical sketching that should be available soon from Willmann-Bell. Jeremy is relatively new to astronomy and even newer to sketching the sky and is already quite the master. Check out his site at <http://www.perezmedia.net/beltofvenus/> --it will knock your socks off!

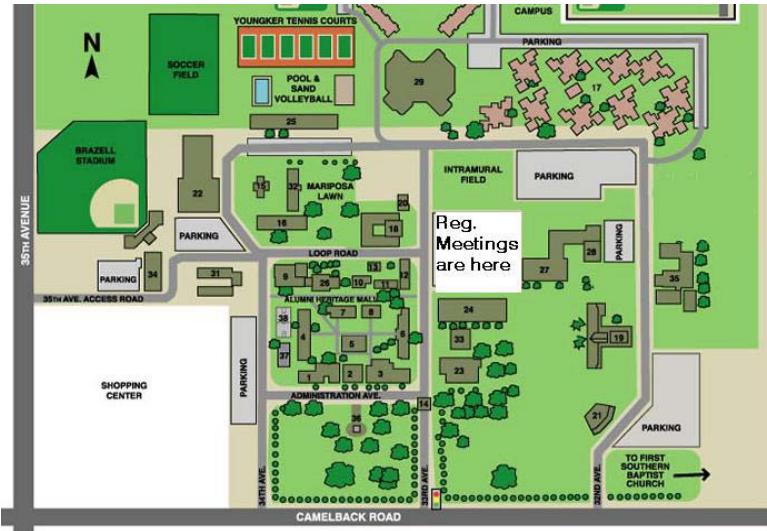
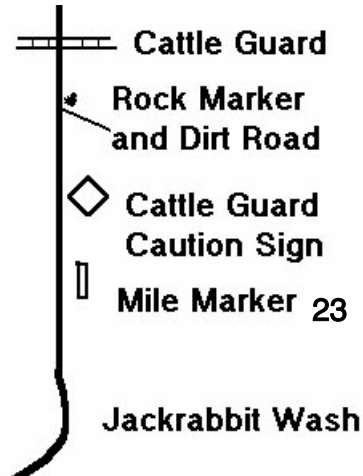
Paul Lind made a quiet but effective gavel-less adjournment with an invitation for us all to meet up at JB's. Twenty five of us groundhogs including Jeremy and Amanda Perez took his advice and whiled the night away until the wee hours perusing Jeremy's sketchbook and talking about our absent President. (*ed, note: Planning a coup d'etat are we???*)

SAC Meeting and Observing Sites

General Meetings

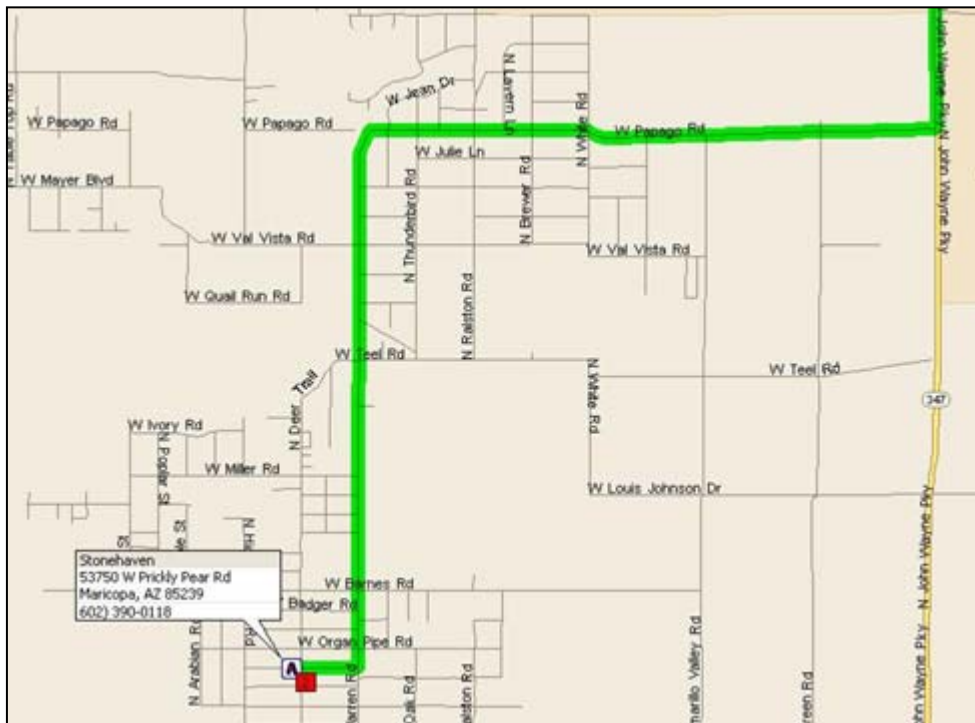
7:30 p.m. at Grand Canyon University, Fleming Building, Room 105: 1 mile west of I-17 on Camelback Rd., North on

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).

Stone Haven Potluck



TAKE I-10 SOUTH TOWARD TUCSON. EXIT AT QUEEN CREEK ROAD TOWARD MARICOPA. PROCEED THROUGH MARICOPA, PAST THE HARRAH'S AK-CHIN CASINO 2 MILES. TURN WEST (RIGHT) ON PAPAGO ROAD. PROCEED WEST 5 MILES. PAPAGO TURNS SOUTH (LEFT) AND BECOMES WARREN ROAD. APPROXIMATELY 4 MILES, YOU'LL SEE BARNES RD. FOUR STREETS PAST BARNES IS PRICKLY PEAR. TURN WEST, (RIGHT), 0.6 MILES, ACROSS DEER TRAIL. YOU CAN'T MISS THE DOME.

53750 W. PRICKLY PEAR RD.
MARICOPA, AZ 85239

CELL-(602) 390-0118
HOME-(520) 424-9731
SDODDER@HOTMAIL.COM

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

March 2007

5643 W. Pontiac Dr
Glendale, AZ 85308-9117

Phone: 623-572-0713

Email: newsletter@saguaroastr.org



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	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