Saguaro Astronomy Club

SACnews

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Inside This Issue

FAR-Sight: Best of Both Worlds Binocular Mount

Bob Christ

"Form Follows Function" can be expressed in utilitarian form – or as an art form. The innovative FAR-Sight binocular mount from Farpoint Astronomical Research embodies both.

To dispense with the obligatory positioning statement, my sole association with Farpoint is that of a highly satisfied user of their elegant FAR-Sight solution. I am sufficiently enamored with this mount to write this review while remaining objective. That said, good is good.

I am a visual observer that has benefited from GoTo technology for several years now. Having said this; the "purist" in me began to bubble to the surface. In my younger years I would only use pool cues and baseball bats made of wood when fiberglass and aluminum were readily embraced replacement materials. I began to yearn to actually learn the sky, and what better way than to develop star-hopping skills.

My 9.25" NexStar GPS telescope hardly qualifies as a star-hopping tool; so I felt using binoculars would be the rational way to begin. I own a pair of Leupold 9x25 Gold Ring binoculars purchased years ago and quickly discovered they were not up to the task. The quest for a pair of astronomy binoculars began.

I quickly learned in detail about the characteristics critical to choosing a pair of astronomy binoculars – but which model to choose? The more thought I applied to this, the more I became unsure and vacillated. 10x50, 9x63 - each viable choices but I wanted to make the best decision for me, the first time around. One evening I looked through a pair of Celestron 15x70 SkyMaster binoculars a fellow Saguaro Astronomy Club member (Steve Coe, BTW) owns and I immediately knew I had found the right pair – aperture, good optics, and value. I also recognized that holding the 15x70's manually would not be an option. A new quest ensued – to find a tripod up to the task.

The astronomy gods shined upon me and I found a used, 50-year old Davis & Sanford Model B tripod in beautiful condition that extends to 93" (yes), is rock solid, and has the capacity to carry 40 lbs. One would be hard-pressed to find a modern day replacement. Being a tad over 6'7"

(Continued on page 3)

NASA Space Place

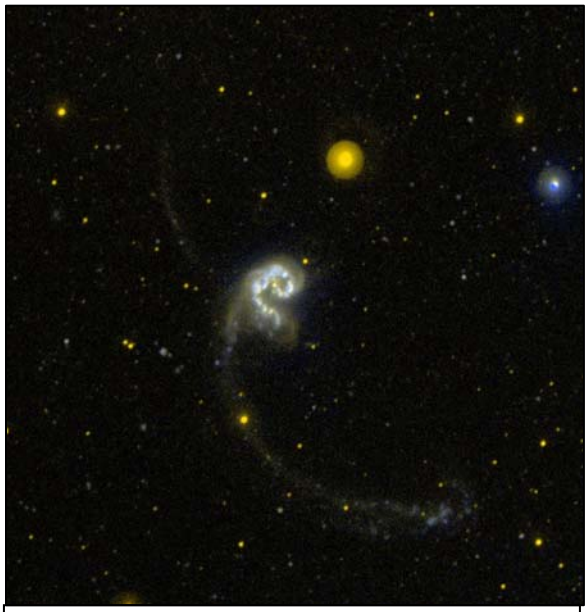
A Great Big Wreck

By Dr. Tony Phillips

People worry about asteroids. Being hit by a space rock can really ruin your day. But that's nothing. How would you like to be hit by a whole galaxy?

It could happen. Astronomers have long known that the Andromeda Galaxy is on a collision course with the Milky Way. In about 3 billion years, the two great star systems will crash together. Earth will be in the middle of the biggest wreck in our part of the Universe.

Astronomer John Hibbard isn't worried. "Galaxy collisions aren't so bad," he says. A typical spiral galaxy contains a hundred billion stars, yet when two such behemoths run into each other "very few stars collide. The stars are like pinpricks with lots of space between them. The chance of a direct hit, star vs. star, is very low."



This GALEX UV image of the colliding Antennae Galaxies shows areas of active star formation, which is not in the tidal tails as one might expect.

Hibbard knows because he studies colliding galaxies, particularly a nearby pair called the Antennae. "The two galaxies of the Antennae system are about the same size and type as Andromeda and the Milky Way." He believes that the Antennae are giving us a preview of what's going to happen to our own galaxy.

The Antennae get their name from two vast streamers of stars that resemble the feelers on top of an insect's head. These streamers, called "tidal tails," are created by gravitational forces—one galaxy pulling stars from the other. The tails appear to be scenes of incredible violence.

But looks can be deceiving: "Actually, the tails are quiet places," says Hibbard. "They're the peaceful suburbs of the Antennae." He came to this conclusion using data from GALEX, an ultraviolet space telescope launched by NASA in 2003.

The true violence of colliding galaxies is star formation. While individual stars rarely collide, vast interstellar clouds of gas *do* smash together. These clouds collapse. Gravity pulls the infalling gas into denser knots until, finally, new stars are born. Young stars are difficult to be around. They emit intensely unpleasant radiation and tend to "go supernova."

GALEX can pinpoint hot young stars by the UV radiation they emit and, in combination with other data, measure the rate of star birth. "Surprisingly," Hibbard says, "star formation rates are low in the tidal tails, several times lower than what we experience here in the Milky Way." The merging cores of the Antennae, on the other hand, are sizzling with new stars, ready to explode.

So what should you do when *your* galaxy collides? A tip from GALEX: head for the tails.

To see more GALEX images, visit www.galex.caltech.edu. Kids can read about galaxies and how a telescope can be a time machine at spaceplace.nasa.gov/en/educators/galex_puzzles.pdf.

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(Continued from page 1)
tall, the tripod's extensibility was a real bonus. I purchased the tripod and received my binoculars soon thereafter.

Utter disappointment. The plastic binocular mount that ships with the SkyMaster exhibited flexure when finger pressure was applied simply mounting it to the tripod. After mounting the binocular, the slightest nudge resulted in watching a star-studded ping-pong match that first evening. Days later, a trip to the local hardware store produced a heavy duty Stanley right angle bracket that I fashioned into a new mount. A quantum improvement in steadiness was realized but the binocular still moved.

At this point, I discovered that finding Vega, hardly a dim star in the sky, was difficult to find using the binocular. One would think it should be easy with a 4.4 degree FOV. This was perplexing, but I could implement a solution that I had read about. I cobbled a dovetail mount to support an $8.84 Daisy Red Dot Finder purchased from Wal-Mart by filing down the second of two angle brackets in the original package, reduced the LED's output, and finally had a functioning setup. But I knew it could/should be better.

Enter the FAR-Sight mount. I saw mention of this elegant solution in the January 2007 issue of Sky & Telescope as one of their Hot Products for 2007 and immediately knew that it would satisfy my needs.

I ordered the FAR-Sight and it arrived promptly, housed in a well-packaged bolt case – the first manifestation of product quality. "First touch" was a wonderful experience. Constructed of 3mm thick laser-cut stainless steel, the mount is robust and gorgeous to behold. Immediately the fit-and-finish of the mount engenders confidence in its ability to do its job – and, with style. Rounded edges, artfully removed excess weight, precise construction and obvious attention to detail characterize its construction.

The FAR-Sight attaches to a tripod via a standard 1/4"x20 female fitting. A composite material on the underside of the mount assures a firm, non-slip connection to the tripod when the mount is affixed and tightened-down.

The FAR-Sight is comprised of two pieces, the mount itself and a beautifully machined stud that is attached to the binocular. Anxious to see the mount in action, I tried to hand push the mounting stud into the mount's slot. Unable to engage the parts I noticed there was an apparent issue of square metal faces meeting each other and I was reminded of the Physics Law of Impenetrability – two objects cannot occupy the same space at the same time. Believing the mount was defective; I called Farpoint and spoke with Allan Keller. He reassured me the mount would work flawlessly when actually mounting the binoculars and he was indeed correct.

Allan Keller, FAR-Sight's designer, is co-founder of both Farpoint Astronomical Research and its parent company Optical Structures, a company that makes telescopes and associated items for the research community. His attention to detail in the mount is readily evident. He crafted the mount for himself and realized others could benefit from it as well. I count myself as one.

The stainless steel mounting stud is firmly hand-screwed into the binoculars' pivot point and a small hex bolt (wrench included) is then tightened to lock the stud to the binoculars. There is no need to overly tighten the hex bolt. Mr. Keller utilizes a cone washer assembly to provide the clenching tension that holds the binoculars rigidly in place when the stud is pushed down into the mount's keyhole-shaped slot. A detented locking plate is then swung down to serve as a safety measure.

If the interpupilary distance (IPD) of the binocular needs to be changed to accommodate a second observer, simply apply pressure against the clenching friction and the adjustment can be easily made. I am aware that some binocular mounting stalks, because of their width, can interfere with achievement of the binoculars' narrowest IPD. While I cannot speak for binoculars other than my SkyMaster, the FAR-Sight mounting stud positions the unit far enough back so the binocular housing clears the mount. Once the mounting stud is fully engaged in the keyhole slot the binocular is held firmly in place without any axial rotation. Additional mounting studs are available for those observers that own multiple binoculars.

A nifty flash presentation can be found at http://www.farpointastro.com/farsight.html that visually depicts how the parts work together.

A quasi-dovetail plate assembly on the top of the mount allows attachment of your red dot finder of choice. After a viewing session, takedown for travel/storage is as easy as rotating the locking plate 90 degrees out-of-the-way, applying pressure, and lifting the binocular off the mount. The safety tab is detented in both the locked and release positions and remains where placed.

The Farpoint Web site relates the FAR-Sight can be installed on a parallelogram-style mount as well, a future

(Continued on page 8)

Call For Observations– Eridanus

By A.J. Crayon

We have encountered a lack of with observations from Eridanus; no doubt due to holidays and weather. Only Rick Rotramel and Rick Tejera submitted observations – thanks Rick and Rick they are much appreciated. As you may realize there are others that have observations from years gone by and I have taken the liberty, without advance notice, to use their observations. Namely Steve Coe, Ken Reeves and myself; Steve's comes from the SAC web site at http://www.saguaroastro.org/content/obsnotes/ERIDANUS.htm and Ken's, *Fuzzy Spo*t from December 1997, found at his personal site http://www.users.qwest.net/~kreeves/index.htm. Although I haven't visited Eridanus with my 8" since 1984 I have some from there and some with the 14" and they have been included.

I liked what Ken had to say about Eridanus it says in part, "Don't expect the objects to jump out at you in this area of the sky. Mainly galaxies reside here, and none of these are showpieces. Observing these lesser object not only helps you hone your observing and star-hopping skills, it will make you appreciate the major objects in the sky, and actually will help you observe more detail in such objects."

Note that, for NGC1535, there are differences seen in the color of this pretty planetary. Check out Steve Coe's observation with a 36" from the Ultimate Star Party.

So much for the hype, let's see what the River has to show.

NGC1084

8" f6, Dobsonian, at 80X; Rick Tejera: Bright and very slightly elongated N-S, maybe 1 1/2 -1. It is gradually brighter to the middle with a core that is not much brighter than the halo. A few interesting star chains nearby,

8" f6, Newtonian; AJ Crayon: very-very faint and a little elongated.

10-inch F4.5 Dobsonian; Ken Reeves: This galaxy sits right on the border with Cetus. At **70X** it is seen as fairly bright, somewhat elongated NE/SW, pretty bright in the middle with no nucleus, and a fainter halo. Averted vision makes it grow a little. At **170X**, the middle is still fairly bright and somewhat mottled.

13" f5.6, Newtonian, at 100X; Steve Coe: Easily seen at 100X, pretty bright, elongated and somewhat mottled at 180X.

14.5-inch f5.2, at 140X; AJ Crayon: pretty bright, pretty large, very elongated in a northeast position and has a gradually brighter middle in same general position. One spiral arm along the north side was suspected. At **220X** and with averted vision this galaxy gets wider, brighter and some mottling was suspected during moments of good seeing.

16" f4.4, Newtonian; Rick Rotramel: G - fS, fB, oval spiral, and slightly brighter stellar nucleus.

NGC1209

13" f5.6, Newtonian, at 150X; Steve Coe: Pretty faint, pretty large, elongated 2 X 1 in PA 45, pretty suddenly brighter middle.

NGC1300

8"f6 Newtonian, 80X; AJ Crayon: elongated, very faint with a gradually brighter middle and a stellar nucleus. The field contained 8 stars of 9th and 10th magnitudes.

13" f5.6, Newtonian, at 135X; Steve Coe: Pretty bright, large, very elongated and suddenly much brighter in the middle. With averted vision I can just pick out some barred spiral structure. At **150X** it is pretty bright, large, very much elongated 4X1 in PA 90, suddenly much brighter middle. An obvious barred spiral with the southern arm more prominent. Averted vision helps a lot with the detail in the spiral arms. At **220X** it is too much and the spiral arms almost disappear.

14.5-inch f5.2, at 140X; AJ Crayon: very bright, pretty large, very elongated in an east southeasterly position and has a stellar nucleus. There is a very faint fuzziness below and a very-very faint fuzziness above, no doubt these are traces of this barred spirals arms.

16" f4.4, Newtonian, at 90X; Rick Rotramel: G - pL, fF, oval, very nebulous.

36" f5 Dobsonian at the Ultimate Star Party with 14mm; Steve Coe: Obviously a barred spiral, the arms wrap around the oval central section. There are 5 other galaxies with one field of view of 1300.

NGC1353

13" f5.6, Newtonian, at 150X; Steve Coe: Pretty bright, pretty large, much brighter middle and much elongated 2.5 X 1 in PA 110. This is a nice edge-on galaxy.

NGC1395

13" f5.6, Newtonian, at 165X; Steve Coe: Pretty bright, pretty large and much brighter in the middle. It is somewhat elongated (1.5X1) in PA 75 degrees. There is a 13th mag star involved on the west side.

NGC1400

13" f5.6, Newtonian; Steve Coe: Pretty bright, pretty

(Continued on page 5)

(Continued from page 4)
large, little elongated 1.5 X 1 in PA 30, brighter middle at **150X**.
14.5-inch f5.2, at 90X; AJ Crayon: in field with NGC1407 and pretty small, round, fairly bright with a small much brighter middle.

NGC1407

8" f6, Dobsonian, at 80X; Rick Tejera: Seen between two stars to the N & S. Seemed slightly elongated N-S and suddenly brighter to the middle.
8"f6 Newtonian, 80X; AJ Crayon: this galaxy is 3' and 11th magnitude; has a gradually brighter middle with a stellar nucleus. The field has 15 stars from 8th to 13th magnitude. WOW where has this galaxy been hiding?
13" f5.6, Newtonian; Steve Coe: Pretty bright, pretty large, very little elongated 1.2 X 1 in PA 45, much brighter middle with a stellar nucleus at **150X**. NGC1400 and NGC1407 are both surrounded by 10 fainter galaxies within one degree.
14.5-inch f5.2, at 90X; AJ Crayon: pretty large, pretty bright, gradually brighter middle and a little elongated in a northeasterly position. Putting this galaxy near east edge brings in NGC1393, NGC1400 and NGC1402
16" f4.4, Newtonian; Rick Rotramel: G - S, fB, fuzzy glow with brighter stellar nucleus. There are two more galaxies in the same field.

NGC1535

8" f6, Dobsonian, at 71X; Rick Tejera: Noted as pretty bright and small. It is stellar in nature with just a hint of nebulosity around core.
8" f6, Newtonian, 100X; AJ Crayon: A combination of two observations - bright, little elongated, much brighter middle, annular, central star suspected
10-inch F4.5 Dobsonian; Ken Reeves: If you are looking for something other than galaxies, here is a planetary nebula. At **100X**, it is pretty bright, fairly small, and pretty even. Neither averted vision nor the UHC filter helps much. I cranked the magnification all the way up to **240X**, and, other than spreading it out, there wasn't much difference seen.
13" f5.6, Newtonian; Steve Coe: Bright, pretty large, round, easy to spot at **100X**. Going to **180X** shows two concentric rings, one bright near the center, the other ring dimmer and larger that forms the outer edge of this planetary. The central star is easy at high power and the nebula is light blue at all powers. On another observation at **100X**—it was seen easily, small, central star seen but needs more power. At **330X**--bright, pretty large, round, somewhat brighter middle, central star easy. A light blue color, the "CBS eye" effect is noticed at high power.
14.5-inch f5.2, Dobsonian, at 290X; AJ Crayon: combination of two observations - pretty large for a PNe, pretty bright, round, suddenly much brighter middle about 5/8 the diameter, 3 shells of nebulosity, middle one largest and has a very bright central star. The UHC increases the contrast and three different brightnesses were easily detected starting the fainter outer shell, brighter middle and brightest in the center.
16" f4.4, Newtonian, at 220X; Rick Rotramel: PN - pL, pB, brighter inner disk, bluish gray. Pretty!
36" f5 Dobsonian at the Ultimate Star Party with 12mm; Steve Coe: a bulls-eye of nebulosity, with the inner ring as light green and a light pink outer fringe. The central star is easy and has a very thin dark region surrounding it. There is a very faint star involved at the edge of the nebula at 7 o'clock.

Call for Observations

Although there are a finite number of constellations, 88, and even fewer to be seen from Arizona there are some that we haven't visited. For March we will be able to scratch another from that list, for we will take one of several visits to Camelopardalis. There's quite a list of deep sky objects with a magnitude of 12 or brighter and for this excursion we'll stay with just seven of them. You shouldn't have much trouble hunting these down in modest size telescopes so let's get to the list. Starting with the western most, and continuing to the east, we'll start with **Stock 23**, also known as Pazmino's Cluster that has about 25 stars in a 15' area and, to save you some time just in case, it is located at RA 03 16.2 dec. +60 06. Next is **Collinder 464**, located at RA 05 12.6 dec. +73 58, with 50 stars in a 120' area. Compare and contrast these two clusters. A couple of hours of right ascension later is the magnificent spiral galaxy **NGC2403**. See how much detail you can coax out of its spiral arms and its middle. Now the toughest of the lot is from the Morphological Catalog of Galaxies **MCG +13-07-007** 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! Moving right along we now get to **NGC2655**, finally something in the NGC. This barred spiral is bright and large; see what details this one has for us. **NGC2715** is another barred spiral, not quite as bright but elongated. Finally we get to **IC 3568** a surprising planetary nebula with a magnitude 12.9 central star. I have no record of color being detected. Do you see any?

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

(Continued on page 9)

President's Corner

By Rick Tejera

OK, so the new year got off to a shaky start weather-wise. I missed freezing my butt off at Flat Iron on the 13th, instead choosing to watch my daughter freeze her but off dancing before the Coyotes game at the Glendale (I just can't say Jobing.com) Arena. I was not to upset at missing the star party as I had grandios plans for Hovatter rd the following weekend. Alas Meteroa was displeased with Jimmy Ray's purchase of a new Celestron CGE and poured her wrath upon us all. Let's hope Jimmy learned his lesson about buying new Astro stuff near new moon. Bad Jimmy! Hopefully, February will be kinder to us.

Speaking of Observing, Last month I mentioned the need to begin searching for a replacement for Flatiron. Well, between Steve Coe, AJ Crayon and the Polaki, we have two candidates. The first is about 6 miles west of the little town of Arlington, which is south of Buckeye along Old Rte 80 (the old route to Gila Bend). Steve & AJ's early report sound promising. The only con's so far are the 6 mile trek on a Dirt road, and the Palo Verde Nuke plant to the north can be a bit obtrusive. As II write this the debate is if we should move the Feb 13th Star party to this site as a test run. More on that next month.

The other site is out near Tonapah near Saddle mountain. In it's favor the dirt road trek is much shorter. However, it has not been "dark tested and the possibility that headlights from I-10 will be very noticeable is very real. Again once it's tested out under dark skies, we can compare notes and make a decision.

Don't forget to mark Mar. 17th on your calendars. Yes it time for the astronomers version of March Madness: The All Arizona Messier Marathon. See the announcement elsewhere in this issue for details or go to the SAC website at http://www.saguaroastro.org/content/messier2007.htm.

It looks like we'll have some prices and designs for the 30th anniversary shirts, hopefully at the February meeting. Notice said Shirts, not T-Shirts. Jack has indicated Polo shirts will be offered as well. He plans on having the details & prices posted on the website soon. Stay tuned.

I've asked Paul Lind to take a straw poll at the February meeting to get an idea of how many folks would plan to attend a 30th anniversary dinner event. We're looking to get an idea of not only how many but when the best time to hold the event would be. My 0.0734539 United Arab Emirates Dirhams worth would be for July or August, during monsoon. Let the board know what you prefer so we can plan accordingly.

One final reminder: If haven't al ready done so, please renew your membership for 2007, blah ,blah, blah . Newsletter until March, blah, blah, blah. Seriously, the club is only as strong as it's membership, so lease take the time to renew. We'd really miss you.

Until next month, Clear Skies

Monthly Trivia Question

5000 years from now, in what constellation will the South Celestial pole reside?

Answer to last months Question: According to then SAC DB, how many non-Galaxy Deep Sky objects are there in Virgo?

According to the SAC Deep Sky database v7.7, 42 of the 748 objects in Virgo are not galaxies. If you Sift our all the multiple stars you're left with 7 objects, 3 of which are listed as non existent. That leaves you with 1 Quasar, two planetary nebulae and one Globular Cluster. Can you find them?

March 2007

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2 SAC Meeting, GCU 1930	3 ○
4	5	6	7	8	9	10 SAC Star Party, Flat Iron
11 ☾	12	13	14	15	16 All Arizona Messier Marathon	17 All Arizona Messier Marathon
18 ●	19	20	21	22	23	24
25 ☽	26	27	28	29	30	31

Schedule of Events for March 2007

Mar 2nd	SAC General Meeting at Grand Canyon University at 1930, Speaker: TBA
Mar. 3rd	Moon is Full at 1617 mst.
Mar, 10th	SAC Star Party at Flat Iron, Sunset 1835, End Ast. Twilight 1958, Moonrise 0112.
Mar, 11th	Moon at 3rd Quarter at 2054 mst.
Mar. 16th & 17th	2007 All Arizona Messier Marathon at the Farnsworth Ranch, Arizona City, See page 10 for Directions
Mar. 18th	Moon is new at 1942 mst.
Mar. 25th	Moon at first Quarter at 1316mst

Future Planning

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

The 2007 All Arizona Messier Marathon

When: Saturday March 17th, 2007
Where: The Farnsworth Ranch, Arizona City

Solar Data

March 17th	Moonset	1718
	Sunset	1840
	Twilight	1958
March 18th	Twilight	0512
	Moonrise	0616
	Sunrise	0628
	New Moon	1943

Registration is not required. The event is free and open to all, but we ask either you or your club's support in purchasing the award plaques. The cost is under $10.00.

All participants are required to sign a liability waiver, available from the coordinators or online at: http://www.saguaroastro.org/content/messier-images/marathon-liability.pdf

For more details please go to: http://www.saguaroastro.org/content/messier2007.htm , Directions are on Page 10 of this issue and online at the link above.

implementation that is of high interest to me. I can apply sufficient leverage to easily mount/remove my binocular from my tripod-mounted unit, but the "floating head" of a parallelogram mount does not afford the same leverage points. To satisfy my curiosity, I removed the FAR-Sight from my tripod and found that applying pressure on the large upper head and lower cross-reinforcing piece toward the bottom of the mount serve handily to apply the necessary pressure to install/remove the binocular.

In use, the 11 oz. mount is incredibly stable. Said mathematically: zero flexure = zero dampening time = most pleasurable viewing. When using my FAR-Sight, vibration is no longer part of my binocular mount equation.

To be objective, this review does need a "con" comment to help balance the superlative qualities I have related about this mount. There is one con, and it is truly a micro nit. The silver colored adhesive label, while certainly not shabby, does not bespeak the quality of this mount. Acid or laser-etched lettering to mark the product would complement the quality of this wonderful product.

The FAR-Sight is priced at $64.95, not much more than the cost of some of the elite brand mounting stalks that do not offer comparable rigidity or even the ability to mount a finder unit. Farpoint prices each additional mounting stud at $9.95.

The FAR-Sight is an elegant solution that delivers the best of both worlds: form and function.

Bits And Pisces: Minutes of the January 5th,2007 Meeting

By Jennifer Polakis

President Tejera crashed thee authoritative gavel at exactly 0230 UTC

Forty three people including 2 visitors started the New Year on a good note by attending our first meeting since last year. Gene Lucas, our esteemed founding member, showed up to celebrate his last day of work! Congratulations on your retirement Gene.

Paul Dickson, Treasurer assures that we're solvent.

The President advised us that he will be absent from our next meeting on February 2nd to celebrate his daughter's birthday with the groundhogs.
Happy Birthday Lindsay; and may the Groundhog's shadow buy us more time for observing on the desert.

Peter Argenziano might still have some 2007 RASC Observer's Handbooks available for $20. (This is the 99th year for the handbook!)

Steve & Rosie Dodder requested assistance on the refurbishing of Pierre Schwaar's Bino Chair on January 27th and invited us all for the next Stone Haven Observatory Potluck Starparty in April. A special thanks to them for taking on that project.

AJ Crayon re-announced the information for the 2007 Messier Marathon which will be held March 17th (St. Patrick's Day). 109 of110 available with M30 too late for Sunday morning. He then awarded Paul Lind the 355th Hershel 400 award. Paul is the 13th SAC member to achieve this success and SAC is #2 for members completing this project with the 1st place going to the originators, the Ancient City Astronomy Club. Congratulations Paul! Congratulations SAC!

Steve Coe introduced the new lending scope SAC now has available--A lovely Pierre Schwaar "Companion" scope which was recently donated to our club. So, if you're a SAC member--check it out for yourself or try it on one of your children. Steve went on to award the highly coveted "Comet Challenge 2006" certificates to Jimmy Ray who saw 2 of them in his 8", Peter Argenziano--4 in his 25"; Jack Jones--4 in his 20", and Rick Rotramel--4 in his 12.5". Steve apologized for how difficult this project turned out to be and punished himself accordingly by not awarding himself for barely seeing 2 of the 4 available comets of the night in his 11".

Show & Tell

Telrad spoke on the "Best Pair II" freeware utility for scope aligning by Paul Rodman and Jim Burrows. Gene Lucas mentions there's a good discussion on these kinds of things on the MAPUG website. The Polaki (plural of Polakis) showed their night of observing on the Historical 61" Kuiper scope on Mt. Bigelow near Tucson. Gene Lucas and Jeff Hopkins spoke on 25+ years of variable star photometry at HPO, and specifically about the trapezium "A" occultation.
Brian Workman played a DVD he narrated of the November 8, 2007 Mercury Transit and David Fredrickson showed and telled us of his Lick Observatory trip over the Winter Holidays.

Our guest speaker was our very own Honorable Mr. Steven Coe who spoke on diffuse nebulae which, coincidentally, happens to be the name of his 2nd book which is hot off the press!

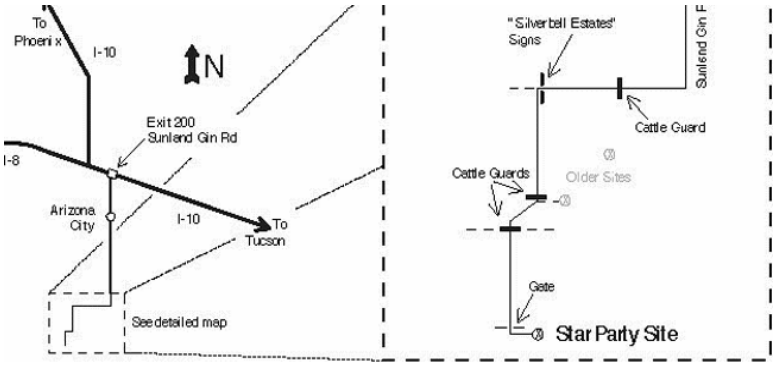
Prez Telrad gaveled the meeting to a close at precisely 0500UTC and invited us to our after meeting meeting at JB's where indeed, 18 of us showed up to bask in more astro talk to tide us over until next meeting.

(Continued from page 5)

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?

SAC Meeting and Observing Sites

All Arizona Messier Marathon



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

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).

SAC Membership Services

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

- ☐ $28.00 Individual Membership
- ☐ $42.00 Family Membership
- ☐ $14.00 Newsletter Only
- ☐ $10.50 Nametag for members, Pinned Clasp
- ☐ $12.50 Nametag for members, Magnetic Clasp (will be mailed to address below)

Magazine Subscription Services

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

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

Please Print

Make Check Payable to : SAC

Name:_____

Address:_____

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

Phone:_____

E-Mail:_____

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

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

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

SAC on the Internet

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

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

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

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

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

Printed Newsletter

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

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

SAGUARO ASTRONOMY CLUB

February 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