



SACnews

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The 2008 All Arizona Messier Marathon

By Rick Tejera

Once a year, the normally empty spot of desert just past a cotton field 30 miles from anywhere in the Arizona desert is visited by a group of people set on staying awake all night. Why would any travel such distances to stay up all night in spot with absolutely nothing around? Well these are not ordinary folks, they are amateur astronomers and the end of March/Beginning of April means only one thing to them:

The Messier Marathon. At this time of year it becomes possible to observe all or most of the 110 deep sky objects French astronomer Charles Messier catalogued back in the late 1700's in one night. This brings out the competitive spirit

on Amateur Astronomers as they look to test their stamina & observing skills.

The group converging on this barren landscape in Arizona is here to participate in the 2008 All Arizona Messier Marathon. The event, hosted by the Deep Sky Group of the Saguaro Astronomy Club (www.saguaroastro.org) has become the premier event of its kind. The combination of clear dark desert skies & pleasant climate draws observers from all over the world. This

year about 100 hardy souls joined in the fun. The majority of observers come from Phoenix & Tucson (The site is about halfway between the two cities). California, Oregon & Michigan were also represented this year. We were also pleased to welcome observers from Hermosillo, Mexico, ensuring the international flavor of the event.

This year the wind as howling during the day and unfortunately a rogue dust devil managed to ruin one observer's telescope. A few other scopes were caught in the wind but survived to observe the night away. By subset the wind had died down enough to begin the fun.



The crowd of marathoners get the twilight pep talk from erztaz AJ, Rick Tejera.

One tradition of the All Arizona Messier Marathon is the twilight pep talk. Normally given by event coordinator AJ Crayon, this year SAC newsletter Editor Rick Tejera filled in as AJ had to attend to family commitments. Once the talk was completed, the observers prepped their weapons and waited the darkness.

The AAMM is an informal affair; rules are more guidelines than hard fast re-

(Continued on page 8)



Stellar Compass for Space Explorers

by Patrick L. Barry

In space, there's no up or down, north or south, east or west. So how can robotic spacecraft know which way they're facing when they fire their thrusters, or when they try to beam scientific data back to Earth?

Without the familiar compass points of Earth's magnetic poles, spacecraft use stars and gyros to know their orientation. Thanks to a recently completed test flight, future spacecraft will be able to do so using only an ultra-low-power camera and three silicon wafers as small as your pinky fingernail.

"The wafers are actually very tiny gyros," explains Artur Chmielewski, project manager at JPL for Space Technology 6 (ST6), a part of NASA's New Millennium Program.

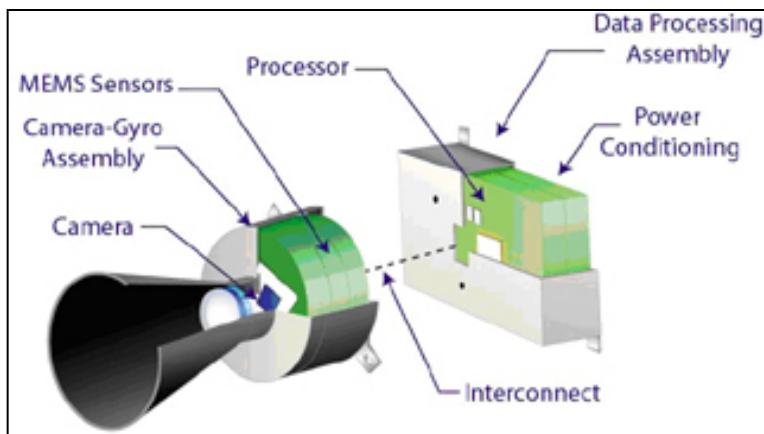
Traditional gyros use spinning wheels to detect changes in pitch, yaw, and roll—the three axes of rotation. For ST6's Inertial Stellar Compass, the three gyros instead consist of silicon wafers that resemble microchips. Rotating the wafers distorts microscopic structures on the surfaces of these wafers in a way that generates electric signals. The compass uses these signals—along with images of star positions taken by the camera—to measure rotation.

Because the Inertial Stellar Compass (ISC) is based on this new, radically different technology, NASA needed to flight-test it before using it in important missions. That test flight reached completion in December 2007 after about a year in orbit aboard the Air Force's TacSat-2 satellite.

"It just performed beautifully," Chmielewski says. "The data checked out really well." The engineers had hoped that ISC would measure the spacecraft's rotation with an accuracy of 0.1 degrees. In the flight tests, ISC surpassed this goal, measuring rotation to within about 0.05 degrees.

That success paves the way for using ISC to reduce the

cost of future science missions. When launching probes into space, weight equals money. "If you're paying a million dollars per kilogram to send your spacecraft to Mars, you care a lot about weight," Chmielewski says. At less than 3 kilograms, ISC weighs about one-fifth as much as traditional stellar compasses. It also uses about one-tenth as much power, so a spacecraft would be able to use smaller, lighter solar panels.



Compass is built as two separate assemblies, the camera-gyro assembly and the data processor assembly, connected by a wiring harness. The technology uses an active pixel sensor in a wide-field-of-view miniature star camera and micro-electromechanical system (MEMS) gyros. Together, they provide extremely accurate information for navigation and control.

Engineers at Draper Laboratory, the Cambridge, Massachusetts, company that built the ISC, are already at work on a next-generation design that will improve the compass's accuracy ten-fold, Chmielewski says. So ISC and its successors could soon help costs—and spacecraft—stay on target.

Find out more about the ISC at nmp.nasa.gov/st6. Kids can do a fun project and get an introduction to navigating by the stars at spaceplace.nasa.gov/en/kids/st6starfinder/st6starfinder.shtml.

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

2008 All Arizona Messier Marathon Official Results

Num	Name	Scope	organ.	Notes
109	Dr. S. Aguirre	8" SCT	(1)	M74
108	Jeff/Julie Trogan	8" SCT	EVAC	M77 M74
108	Ken Shaver	16" Dob	TAAA	M77 M74
108	George Robinson	10" Dob	(2)	M74 M33, by memory
107	David Trogan	8" SCT	EVAC	M77 M74 M33
107	Carter Smith	10" Dob	TAAA	M77 M74 M33
107	Steve Palmer	14" SCT	SAC/PAS	M77 M74 M33
107	Joshua V. Nelson	8" SCT	UofA	M77 M74 M33
107	Kevin LeGore	10" Dob	na	M77 M74 M33
107	Tyler Lancy	8" SCT	na	M77 M74 M33
107	James Hoy	11" SCT	UofA	M77 M74 M33
107	Claude Haynes	10" Dob	EVAC	M77 M74 M33
107	Melvin L. Harrison	10" Dob	EVAC	M77 M74 M33
107	Gary Gardner	24" Dob	TAAA	M77 M74 M33
107	Daniel Butters	10" Dob	EVAC	M77 M74 M33
107	Bob Bortner	8" SCT	EVAC	M77 M74 M33
107	Micah Abel	10" Dob	EVAC	M77 M74 M33
106	Ray Vorbeck	8" SCT	SAC	M77 M74 M33 M110
106	Jake Turner	8" SCT	na	M77 M74 M33 M34
106	Doug Simons	10" SCT	EVAC/SAC	M77 M74 M33 M76
106	Neil Rulien	18" Dob	EVAC	M77 M74 M33 M76
106	Rick Rotramel	12.5" Newt	SAC	M77 M74 M33 M76
106	Butch Miller	8" SCT	EVAC	M77 M74 M33 M110
106	Scott Leach	10" SCT	(3)	M74 M32 M110 M76
106	Tim Jones	9.25" SCT	SAC	M77 M74 M33 M76
106	Ray Heinle	12" SCT	EVAC	M77 M74 M33 M110
106	Wes Edens	8" Dob	SAC	M77 M74 M33 M32
106	Bob Christ	9.25" SCT	SAC	M77 M74 M33 M76
105	Chris Myers	11" SCT	UofA	M77 M74 M33 M110 M76
105	Steve McAllister	10" Dob	SAC	M77 M74 M33 M32 M76
104	Martin Pieczonka	14" SCT	EVAC	M77 M74 M33 M32 M110 M76
104	Brandon Feldman	14" SCT	EVAC	M77 M74 M33 M32 M110 M76
104	Howard Anderson	10" SCT	EVAC/SAC	M77 M74 M33 M31 M32 M110
102	Alan Strauss	80mm Ref	TAAA	M77 M74 M33 M76 M34 M79 M102 M30
102	James & Delia Brix	16" Dob	na	M77 M74 M33 M110 M76 M34 M75 M30
101	Tim English	N/A	SAC	M77 M74 M33 M31 M32 M110 M76 M34 M30
100	Chris Hanrahan	80mm Ref	SAC	M77 M74 M33 M32 M110 M76 M40 M102 M73 M30
98	David/Katie Kroeppler	80mm Ref	(2)	
97	Edward Eastburn	5" Ref	TAAA	
91	Steve Perry	90mm Mak	SAC	
85	Joe Selleck	5" SCT	na	
76	Steve/Rosie Dodder	20" Dob	SAC	
71	Brent Jacobs	24" Dob	EVAC	
69	David Hatch	8" Dob	EVAC	
61	Bruce Anderson	na	EVAC	
56	Mike/Debby Luciano	10" Dob	na	
55	Chris Johnson	14" SCT	PAS	
54	Vito Pontarelli	3" Ref	SAC	
54	Gale Cumberledge	5" Ref	SAC	
51	Scott/Heather Saari	8" Dob	SAC	
27	Steve Dermer	8" SCT	na	

Note sequencing for same number of objects is reverse alphabetical order.

1: Sociedad Astronomica de Sonora Carl Sagan, MEXICO

2: Astronomical League - Member at Large

3: Colorado Springs Astronomical Society

Call For Observations—Ursa Major

By A.J. Crayon

This month we cover the western part of the constellation, saving the bowl until next month and the eastern section for another time. I must say I was surprised to see Charlie Whiting the only one to send in an observation for UGC 4305 – good job.

UGC 4305

8" f6, Newtonian at 120X; Charlie Whiting: This galaxy was not visible to me at low magnification. At **120x** I could just barely detect wisps of the halo. I saw no nucleus. The halo floated in and out of view, covering a few arc minutes of extent. A couple of 12th and 13th mag stars were superimposed on the center and northern section of the halo.

NGGC2681

8" f6, Newtonian; Charlie Whiting: Even at only **38x** I could tell that there was some kind of extended object present. The galaxy has a stellar nucleus and a halo with suspected mottling. A very faint star is shining through the western side. I went up to **120x** and several things changed: The nucleus is a little extended, maybe 5 to 10 arc seconds. There are several very faint stars within the bounds of the halo. And the halo seems to swirl counter clockwise.

8", f10, SCT, 65x, suburban location; Dick Harshaw: Bright star like core, with faint edges. Round. Four very faint stars form a parallelogram around it, including 10th and 11th mag stars on the W side. A 9th mag star is 10 min WNW.

10" F4.5 Dobsonian, 163X; Dave Hofland: ~3' diam round dim glow with a bright stellar core and wide diffuse halo, very suddenly much brighter in the middle, extends nearly but not quite to the faint 13+ mag surrounding stars. With AV it first gives the appearance of being elongated but with patience the object is truly pretty round but the faint overlying stars can create an illusion to me at first of elongation.

10" SCT 125x; Joe Goss: Galaxy- Fairly large, fairly bright, irregularly round, and suddenly brighter towards center.

16" f4.4 Newtonian, Rick Rotramel: G - fS, fB, face on spiral, stellar nucleus, and faint arms.

18" f4.5, Dob, 209X; Dan Gruber: This galaxy has a dim round halo about 3' in diameter and a small, bright core with a stellar nucleus.

NGC2742

This late type spiral galaxy is also known as NGC2816.

8" f6, Newtonian; Charlie Whiting: At **38x** I could tell from the pattern of field stars that I was looking in the right place, but I did not see the galaxy. I dropped in a **60x** eyepiece and there it was. It is an oval gray smudge

southeast of an 8th mag star. At **120x** it was a little clearer. It is elongated about 2 to 1. Aligned east west. It is about 3-arc minute long and has no nucleus. The halo is very gradually brighter to the middle.

8", f10, SCT, 65x, suburban location; Dick Harshaw: The galaxy is a faint, long glow (E-W) and badly needs averted vision. A 9th mag star is 5 min NW.

10" F4.5 Dobsonian, 71X; Dave Hofland: elongated ~3'x1' faint glow aligned ~E-W, gradually brighter to the middle, without distinct core. There is a 7.8 mag star ~4' NW.

10" SCT 125x; Joe Goss: Galaxy- Fairly small, very faint, elongated oval, brighter towards center.

16" f4.4 Newtonian, Rick Rotramel: G - fL, pF, elongated, no distinct nucleus, nebulous.

18" f4.5, Dob, 209X; Dan Gruber: This small galaxy is elongated 3' X 1' E - W. It has tapered ends that are faint at the extremes. There is gradual brightening to the center but no concentrated core or nucleus. A nearby mag 12 field star is obvious to the S.

NGC2768

8" f6, Newtonian at 38X; Charlie Whiting: This galaxy is the 3rd point of a triangle with two 11th mag stars. But it is not really a point. Even at this low magnification it was apparent this was an extended object. At **120x** the galaxy has an extended and elongated nucleus. About 3 or 4 to 1. Aligned roughly east west. The halo is best seen with averted vision. It is also elongated and aligned the same. It extends to 5 or 6 arc minutes.

8, f10, SCT, 65x, suburban location; Dick Harshaw: Bright, it forms an equilateral triangle with two stars. It is elongated E-W, and a 9th mag star lies 10 min W. There seems to be no separate nucleus.

10" F4.5 Dobsonian, 163X; Dave Hofland: ~ 6'x3' Dim very elongated wide diffuse halo, halo overrides a faint star on the E end, rather suddenly brighter in the middle to a lens shaped nucleus, hints of a stellar core.

10" SCT 125x; Joe Goss: Galaxy- Fairly large, fairly bright, elongated 2x1, even brightness across the surface.

16" f4.4 Newtonian, Rick Rotramel: G - fS, fB, elongated, gradually brightens at the nucleus.

18" f4.5, Dob, 209X; Dan Gruber: This fairly bright galaxy has a halo elongated about 5' X 2' E - W, brightening to a very distinct core.

NGC2841

8" f6, Newtonian at 38X; Charlie Whiting: This galaxy is pretty bright as compared to the others I've been tracking down tonight. It is so elongated that it looks like a spindled leg of a chair. It has a bright nucleus. And the

(Continued on page 5)

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halo shows some mottling. At **120x** it looked bigger, fractionally brighter but showed less detail. The galaxy is elongated about 6 to 1. Aligned southeast to northwest. On the northwest edge there are some field stars involved in the halo. I also suspected a dark lane in the nucleus.

8", f10, SCT, 65x, suburban location; Dick Harshaw: Large and bright, it appears mottled at medium and high powers. There is a hint of dust lanes, too. The galaxy is oriented NW-SE. Three 13th mag stars lie 1.5 min NW. A 12th mag star is 2 min NW, and a 9th mag on is 4 min ENE.

10" F4.5 Dobsonian, 163X; Dave Hofland: rather bright 7'x3' glow aligned ~NW-SE, a wide diffuse halo, bright lens shaped nucleus and stellar core, halo extends to 11th mag star on the NW end.

10" SCT 125x; Joe Goss: Galaxy- Fairly large, fairly bright, elongated 2x1, much brighter towards center.

16" f4.4 Newtonian, 200x; Rick Rotramel: G - pL, B, elongated spiral with a bright elongated nucleus and mottled arms.

18" f4.5, Dob, 209X; Dan Gruber: A large galaxy with a halo elongated 8' X 4' in an N - S position. There is a bright core about 1' in diameter.

NGC2880

8" f6, Newtonian at 38X; Charlie Whiting: Could just barely detect this galaxy. I had to go to **60x** to confirm what I thought I saw. It is a small round splash of an object. It looks more like a faint PN. At **120x** it shows a brightening for the nucleus. Overall it is small, only about 1 arc minute in diameter.

8", f10, SCT; 83x, suburban location; Dick Harshaw: Tiny, bright nucleus and small halo.

10" F4.5 Dobsonian, 163X; Dave Hofland: at low power a very small faint spot of glow just off the SW end of a little 20' long asterism that reminds me of a woman's house slipper, the galaxy hanging like a tuft of dust on a thread hanging from the heel end. At **163x** ~2' x 1' dim elongated diffuse glow aligned NW to SE rather suddenly brighter in the middle, with a tiny stellar core.

11", f10, SCT; 140x, suburban location; Dick Harshaw: Moderately bright patch with not much of a nucleus. Oval shape.

14" SCT 150x; Joe Goss: Galaxy- Fairly small, fairly bright, round, much brighter to center

18" f4.5, Dob, 209X; Dan Gruber: A small galaxy elongated 2' X 1' in N - S with a bright core.

Call for Observations

May is Ursa Major, again, but all of the following will be found in the Bowl of the Big Dipper with magnitudes ranging from 10.7 to 11.5 and all on the Herschel 400 list to boot. First is **NGC3610**, a roundish elliptical, followed

by **NGC3613** another elliptical but not so roundish. In the same field is the next one, **NGC3619** a spiral galaxy just 15' away and faintest for this month. The remaining galaxies are all spirals, beginning with **NGC3898**, this one a about the largest of all. Another small slew will get you to **NGC3982**, a rather small barred spiral. The final selection is **NGC3998**, an S0 galaxy. Do you notice a morphological difference between this galaxy and the other spirals? About 3' to the west is companion **NGC3990**, at magnitude 13.5. Can you see this extra curricular galaxy? Also be certain to check for more than just a brighter middle on the spiral galaxies.

There are about 40 objects in Coma Berenices that are in the Messier, 110 Best NGC, Herschel 400 or the Caldwell lists. To this add one large naked eye asterism. That is enough for many appearances of this constellation and this is the first one. To begin with there are some good selections here for any size telescope from a dark site, their magnitudes range from 9.4 to 10.4 as all are, at least, on the 110 Best NGC list and near the Coma Star Cluster to boot. Most are barred spirals, save two, so look for as much detail as possible not only within the middle but in the arms. Try to work on estimating the size and magnitude of each and then compare your results with published values. Keep at this long enough and you will get a feeling about these dimensions and get better and better at estimating. First one to review is **NGC4274** and its Saturn-like structure. Up near the Canes Venatici border is **NGC4414**, a late spiral but what kind of detail can you observe in its middle? Next is **NGC4494**, the sole elliptical. Continuing to move westward is the very elongated **NGC4559**. Next, just to the east of the cluster is one of my all time favorites, the spiral **NGC4565** and an even more elongated galaxy. Can you detect the central dark lane? Lastly, and moving away from the cluster is **NGC4725**. Can you detect other galaxies in the field? With that we will have many more enjoyable sessions to come.

With the advent of summer and the monsoon, a third constellation will be added for the month of June. The middle section of the Serpent, Hydra mostly made up of galaxies. The first entry is 1.5° to the southeast of 5th magnitude SAO155588 and is the elliptical **NGC3091**. Second is the almost round, barred spiral **NGC3313**, and at magnitude 11.4 is the faintest of the selections. Next is the almost edge-on spiral **NGC3717**, is about 60' north of 5th magnitude SAO202553. Continuing the eastward march is **NGC3904** at magnitude 10.9. Then a scant 35' northeast is **NGC3923**, which is the brightest of the selections at 9.8. Both of these galaxies are elliptical. The final selection is the interacting pair **NGC4105** and **NGC4106**.

President's Corner

By Steve Dodder



The North Rim Grand Canyon Star Party is approaching and there are still a couple free camp sites available. This is a wonderful opportunity to show the public the stars and do some observing on your own, too. When we attended in 2000, we noticed that the public seems to go home earlier than those at the South Rim, usually before midnight. And, as there's less staff at N. Rim, they finish up and go home early, too. So, you basically have between midnight and whenever you like to observe in the even more pristine conditions at the North Rim! The extra 1,000 feet of altitude make a difference, and the sky is even darker, unbelievably, than the South Rim. If you can't stay the whole week, we have a group site reserved for 6/21 through 6/25, plus 2 regular sites available between 6/21 and 6/27-that's Saturday through Wednesday and Saturday through Friday, respectively. Traffic is lower at N. Rim, and you get the small groups that like to hang around for a "tour" of the universe. It's great fun!

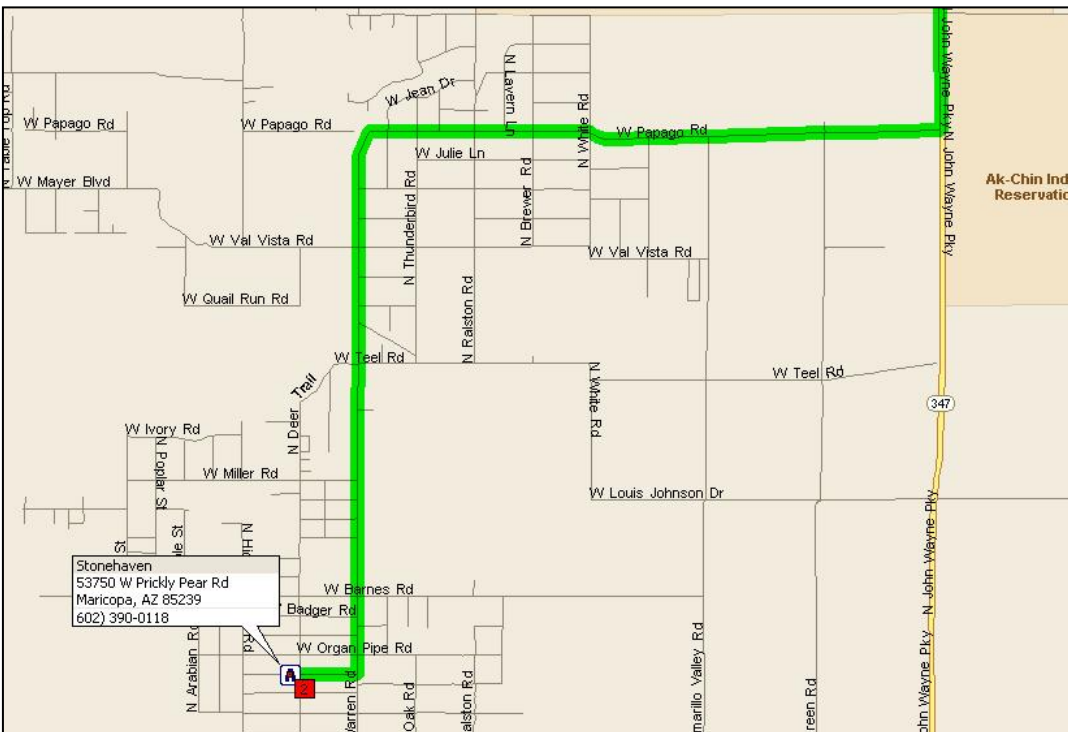
Next up is the Annual Stone Haven Observatory Pot Luck/Star Party/Open House on April 26th. (Some folks are going to miss this because they are volunteering to help out the Girl Scouts in Prescott that weekend. We thank them for their efforts and hope we can turn this into a regular event, too! Thanks Rick Tejera for coordinating this.) If you come to Stone Haven, bring folding chairs, a dish to share and something to throw on

the grill. We'll have some soda, but if there's something specific you'd like, bring that, too. Arrive around 4:00ish, unless you're new and would like to learn about your telescope. (In that case, give me a call and we'll arrange it.) We'll be here even if it's cloudy. If it is, just give a call to make sure it's not raining. If it's cloudy, we can fire up the new Tesla coil for a bit. We'll have Joe Orman once again showing astro slides at dusk. (He's terrific, and promises some great new stuff.) You can observe through the new gift to S.H.O., the 5" F/9 refractor, and I'll have the 20" Newt setup too. Please feel free to bring a scope, if you want. I'm doing my best to have the Pierre Schwaar Binocular Chair ready for use by the party, but it is a big challenge. At the very least, you should be able to see the progress I've made, and maybe, just maybe, sit in it and try out the drive system. Direction are included below.

May 10th is the annual Thunderbird Star Watch. (Directions and details are found on page 11.) SAC has been doing this public event since its inception, and it always proves to be a hit. Set up your scope early and be ready to talk about it, as the public really likes to know the differences and advantages of your equipment. For a couple hours, you can show the public stuff they've never seen before and maybe turn someone on to astronomy!

So, get out under the stars whenever you can, and keep in mind, if you'd like to do some stargazing without packing up all your gear and driving forever, just give me a call, and you can drop in to Stone Haven and use our :stuff:.

Clear Skies! Steve Dodder



Directions to Stonehaven

Take I-10 South toward Tucson. Exit at Queen Creek Rd toward Maricopa. Proceed through Maricopa past the Ak-Chin Casino 2 Miles. Turn West on Papago Rd. Proceed west for 5 miles. Papago Rd. Turns south and becomes Warren Rd. Approximately 4 miles you'll pass Barnes Rd. \$ Block past Barnes is Prickley Pear Rd. Turn right and go 0.6 miles, across the deer trail. You cant miss the dome on the right.

53750 W Prickly Pear Rd
 Maricopa, AZ 85239
 520-424-9731 (H)
 602-390-0118 (C)

May 2008

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

Schedule of Events for May 2008

May 3rd	DOTM Star Party at Cherry II, Sunset 1915, Ast Twilight Ends 2049, Ast. Twilight Begins 0401.
May 5th	Moon is new at 0519mst.
May 10th	Thunderbird Starwatch, Thunderbird Park, Glendale, See page 11 for details & directions
May 11th	Moon at First Quarter at 2046
May 13th	ATM Sub group meeting at Paul Lind's house
May 16th	SAC Meeting at Grand Canyon University at 1930, Speaker TBA
May 19th	Moon is full at 1911mst.
May 23-26th	Riverside Telescope Makers Conference. GOTO: http://www.rimcastronomyexpo.org/
May 27th	Moon at Last Quarter at 1956mst.
May 31st-Jun 1st	5 Mile Meadow Star Party

Future Planning

Jun. 21st-28th	Grand Canyon Star Party; Goto: http://www.tucsonastronomy.org/gcsp.html for South Rim Info, or http://www.saguaroastro.org/content/2008GrandCanyonStarPartyNorthRim.htm for North Rim Info
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quirements. The only real rule is that in order to qualify for an observing award, the observer must view each object through the main eyepiece of his instrument with his on eyes. CCD's, webcams, etc don't count. The event is run on the honor system; no one is there to check your observations. It's been pointed out that the goal is to have fun, so there is no restriction on using go-to or DSC's. All observers who qualify will receive their awards. Observers who log 50 or more objects receive a certificate to commemorate the achievement. The observers with the three highest total object observed receive plaques suitable for mounting on their telescope.

As the twilight drew to a close, observers quickly hunted down the objects in the evening twilight before they set. This year M74 was not visible due to the late date, but at two observers found M77 (The official tally had not yet been counted the time this was this is written. The Official Results are on Page 3). The Andromeda Galaxies proved difficult for several observers as there were some low lying clouds in that direction. Several observers got these objects in morning twilight. M32 was another object that stymied several observers as well. Even though they knew it as in the field of view with M31, there just was not enough detail to discern this satellite of M31. Once the twilight rush passed, the pace settled into its more familiar relaxed pace. Most ob-

servers had completed the list through the Virgo cluster by midnight and took a nap or mingled with other observers until the morning objects began to rise. This year, again due to the late date, the normally frustrating morning twilight objects proved easy. The normally challenging M30 was quite high by twilight. Those who missed M31 & co in the evening had a second chance to bag those objects before turning in their checklists.

By the time daylight dawned over 50 observers had turned in their checklists. Although unofficial, the top score reported as 109. Several observers had 108 & 107 respectively. No one found M74, & M32, M110 & M33 were the other commonly missed objects.

As I collected the checklists in the morning, I asked each observer if they had fun. The response as unanimous all had a good time. To the Saguardo Astronomy Club, that is the true measure of the success of the event.

The official results will be posted on the Saguardo Astronomy Club's website in the near future, along with observing reports. SAC wishes to thank all who participated as the event is nothing without you. We hope you'll join us next year for the 2009 AI Arizona Messier Marathon. Clear Skies.

Monthly Trivia Question

Who was the first female to walk in space?

Last Months Answer: Who was the first person to fly in space twice?

When Gus Grissom commanded Gemini 3, he became the first man to fly in space a second time. Nicknamed "Molly Brown" in reference to the sinking of his Liberty Bell 7 capsule on MR-4, the name so appalled the Public Affairs Office that be at NASA to the point that they would not allow crews to name their ships again until Apollo 9 when it became a necessity with two separate craft (CSN & LM) operating

simultaneously.

Grissom & pilot John W. Young flew 3 orbits of the earth in a shakedown of the Gemini Spacecraft. They became the first crew to alter their trajectory while in space, a key to later rendezvous missions to come. Grissom would perish With Ed White & Roger Chaffee in a ground test of AS-204 (Posthumously renamed Apollo 1). Again Grissom had been entrusted with command of the first flight of new spacecraft. Many believe he would have been the first on the moon had he lived.



Bits & Pisces, Minutes of November 16th, 2007 General Meeting By Jennifer Polakis



Bits and Pisces-SAC Meeting
November 16, 2007
By Jennifer Polakis, Secretary

My last minutes before moving on to VP duties next year. Thanks, and it's been a pleasure(ish).

There were 47 present including two guests.

President Rick Tejera opened the meeting with a special thanks for allowing him to serve a two year sentence as President of SAC. He did a great job for sure and all the while keeping up duties as editor for SACNews. So thank you Telrad for jobs well done.

Treasurer Paul Dickson gave his last Treasurer's report as well (at least until he can be re-elected). Paul does a very professional job at treasurying and is great at keeping all the finances in order. Treasurer is a difficult position to fill and we almost didn't until Charles Whiting volunteered his services for the 2008 Treasurer position. THANK YOU Charlie!

The new slate was voted in as follows:

President Steve Dodder
Vice President Jennifer Polakis
Secretary AJ Crayon
Treasurer Charles Whiting
Properties Director Jack Jones

Outgoing VP Paul Lind said 8 folks showed up at the ATM on Tuesday to work on scopes. Next ATM meeting will be January 15th at 6:00.

Treasurer Paul Dickson and AJ noted that a winner of the last Messier Marathon from Chicago paid for his SAC Plaque and included an extra \$100 donation to the club.

President Telrad announced upcoming star parties, holi-

day party and = meeting date. The 2008 calendar will be down loadable from the SAC Website. Dan Gruber inquired into the future use of our Flat Iron Site west of Phoenix. The general consensus is we won't be using that site anymore.

Show and Tells: Looks like Al Stiewing rounded the learning curve/sunk some more money into his astro-photography. He had stunning shots of M33, M45, CA Neb, and Comet Holmes. Congratulations Al! Rick Rotrammel showed his shots of Comet Holmes taken from his place in Happy Jack and also from the Sentinel Schwaar Star Gaze, wide angles and close ups, various dates from October 28th--Nov. 11th making a great story board of this event. Steve Coe had some daytime photos of the Nov.7th Dirt Blvd Star Party and The Sentinel Schwaar Star Gaze Rick Rotrammel showed video of the All AZ Star Party and the Sentinel Schwaar Star Gaze.

One of Rick Rotrammel's photos of Comet Holmes taken from the Sentinel Schwaar Star Gaze November 11, 2007

After break, our guest speaker was our very own Steve Coe with his talk on Lord Rosse. An interesting story of the 72" Leviathan in Ireland, the largest scope in the world from 1842 until 1917 when the 100" was built on Mt. Wilson. Definitely a good comparison talk to last month's talk on the Large Synoptic Survey Telescope! For this Thanksgiving Holiday, I am thankful to be an amateur astronomer now in these years of great affordable and accessible telescopes.

Lord Rosse's drawing of M97-The Owl Nebula

The after meeting meeting at JB's was attended by 24 of us lucky modern day amateur astronomers most of whom succumbed to JB's Midnite Madness Special of Lemon Pepper Owl Nebs with two sides of rice--tastes like chicken.

Bits and Pisces, Minutes of the February General Meeting

By A.J. Crayon



President Steve Dodder promptly called the meeting to order at 1930 mst. and called for visitors. Australian astronomer Carol Alger introduced herself and told a little about her involvement with Parks Antenna and SETI. She indicated they are looking away from earth for intelligent life. That's an interesting concept.

Treasurer reported we have \$5051.00 cash on hand with 61 current members and 44 in arrears.

During announcements Paul Lind discussed the ATM group and their plans on building a binocular mount. He showed us one that he handcrafted himself – a pretty nice contraption. Steve Dodder discussed some weight and balance problems he is working out with the binocular chair and is well on the way to a good solution – depending on the observer's weight. AJ Crayon discussed an observing list that was available for \$10.00. While having the floor the 2008 All Arizona Messier Marathon was also discussed.

Waivers for 2008 and additional check lists need to be printed. Steve Coe discussed various items for sale and the upcoming Thunderbird Starwatch for May 10th. The March 29th SAC Star Party will set aside some time for novices and their questions. A separate flyer will be available with additional information.

During Show-n-Tell JD Maddy showed some nice photographs of iridium flares and comet Holmes. Steve Dodder discussed our assistance with a Girl Scout event, in Prescott, that is scheduled on our April 26th meeting date. Rick Tejera, who already works with the Girl Scouts, volunteered to take the lead on this topic. The North Rim Grand Canyon Star Party and its plans were discussed. If anyone is planning on attending the event, and wants a campsite, they should have their reservations in by March.

After the break space artist Joe Bergeron discussed *A Journey Around the Universe*. and showed us some breathtaking paintings.

After the meeting we adjourned to JB's for more advanced discussion over coffee, desert and dinner.

Bits and Pisces, Minutes of the March General Meeting

By A.J. Crayon

Esteemed President Steve Dodder opened the meeting with about 50 people in attendance. This evenings meeting was held at the Williams Lecture Hall because of the expected larger crowd for the speaker. Charlie Whiting gave the treasurer's report – we have a balance of \$4784.00 in checking and \$39.00 cash on hand.

Announcements included the Thunderbird Star Gaze, Rick Tejera discussed plans for supporting the Girl Scouts astronomy outreach event. AJ Crayon discussed the 2008 All Arizona Messier Marathon and set out checklists and waivers for signatures. Steve Dodder discussed a telescope that is to be donated to the SAC coffers. He will post information on the e-mail list to gather more information on how to proceed. The Grand Canyon Star Party from June 21st thru 28th was discussed, both the south and north rim possibilities. SAC will host a pizza party June 22nd. If interested in the south rim, contact Jack Jones; north rim, contact Steve Dodder. Jennifer Polakis discussed the Arizona Science Centers request for astronomers' assistance during an hour of darkness on Saturday, March 29, 2008 from 8:00pm to 9:00pm. Steve Dodder invited the club to a potluck, discussion and club star party at Stone Haven Observatory to be at 4:00pm on April 26th. For a map to the site go to its web page and click on the rotating observatory at the bottom.

For Show-n-Tell Tom Polakis showed some slides taken during a winter trip to Michigan and some taken from in and around the Phoenix area. Al Stiewing had some CCD images of a very large and low surface brightness Comet Holmes. Steve Coe discussed why the latest Saddle Mountain site needed to be abandoned. He ended up showing some slides taken from his backyard with a ToUCam of the moon at prime focus. Then there were some piggyback images from the Antenna site of NGC1499, The California Nebula, and Comet Holmes.

After the break Jennifer Polakis introduced the evening's speaker, Frank Zullo. He is a well know Arizona photographer that has had images in *Time*, *Life*, *National Geographic* and *Arizona Highways*, amongst other well known periodicals. His talk *The Sky in Stone* is in preparation for an upcoming issue of *Arizona Highways*. The extra meeting space was needed – thanks to the organizers for the heads up here.

The meeting adjourned just before 10:00am and many meandered to JB's Restaurant for nourishment and more discussion.

Bits and Pisces, Minutes of the March Board Meeting

By A.J. Crayon

Gene Lucas reported on his findings to get the red blinker lights back on-line. Main expenditure was \$20.00 for batteries. All are now in working order.

The Messier Marathon was discussed and one of the last topics to be covered by AJ Crayon was placement of the SAC signs and red blinker lights. Steve Dodder will handle this responsibility. The signs are to help those that haven't been there to aid in locating the site. The blinker lights are to assist those leaving or arriving during darkness.

As in past years the telescope plates will be purchased by the SAC treasury and will be reimbursed by members club or individual participant. This procedure has worked since the inception of the All Arizona Messier Marathon.

The final piece of business was the telescope donation. After some discussion it was decided there should be an announcement at the General Meeting about the donation and that it would be posted on the e-mail Forum for addition feed back.

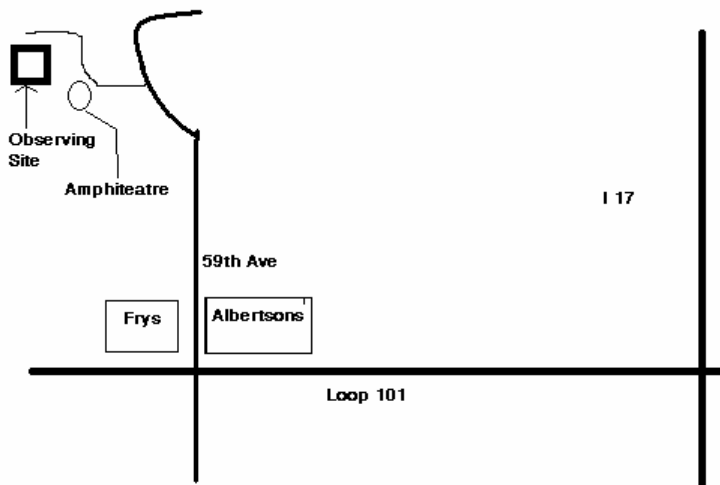
Spring Thunderbird Starwatch

When: Saturday May 10th, 2008

Where: Thunderbird Park, Glendale

When: 1915 (7:15 p.m.), Setup Begins 1830 (6:30 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. Rangers will be there to direct you if you've never been there.

There will be port a potties available.

SAGUARO ASTRONOMY CLUB

April 2008

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Videmus Stellae



SAC Schedule of Events 2008

SAC Meetings

January 18th, 2008	July 11th, 2008*
February 22nd, 2008	August 15th, 2008
March 21st, 2008	September 12th, 2008
April 11th, 2008*	October 10th, 2008*
May 16th, 2008*	November 14th, 2008
June 13th, 2008*	Holiday Party, TBA

* *Rescheduled Meeting Date*

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Jan 5th, 2008	1737	1905	0608	A
Feb 2nd, 2008	1824	1929	0507	S
Mar 1st, 2008	1829	1952	0346	S
Apr 26th, 2008	1911	2042	0100	S
May 3rd, 2008	1915	2049	0401	C
Jun 28th, 2008	1945	2130	0142	C
Jul 26th, 2008	1935	2113	0021	C
Aug 23rd, 2008	1903	2033	2303	C
Sep 27th, 2008	1815	1938	0455	S
Oct 25th, 2008	1747	1910	0432	S
Nov 22nd, 2008	1726	1853	0331	S
Dec 12th, 2008	1730	1859	0128	S

Future Planning

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

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