



Sacnews

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The Evolution of an Amateur Astronomer

By Rick Tejera

A recent posting to the SAC-Board list made note that SAC now has 101 active members. By active, I mean paid up. But this got me to thinking, how many members are really active??? What benchmark for "Active" do you use? How does one go from "Armchair" astronomer to "Avid" astronomer?

The reasons people get involved in astronomy are as diverse as the people who are involved in astronomy. I think if you polled the club you'd get 101 different reasons that drew them to join. Some always had a latent interest and some recent event, like an eclipse or meteor shower or even a view through a telescope at public star party sparked that interest into a flame. Maybe they have always

been involved but just relocated here. Maybe they are looking for a constructive use of free time and exploring possibilities. Whatever, they're here, now what will spark that initial flame into a roaring inferno?

For me it was a Christmas gift that got me here. Years ago, my wife got me a department store telescope for Christmas. It was defiantly a surprise as I never saw it coming nor had I even hinted I'd like to try astronomy out. I'd always had a bit of interest from when I was a space struck kid growing up during the height of the space race, but it never really went much past that. Once I Set the telescope up on the balcony and pointed it

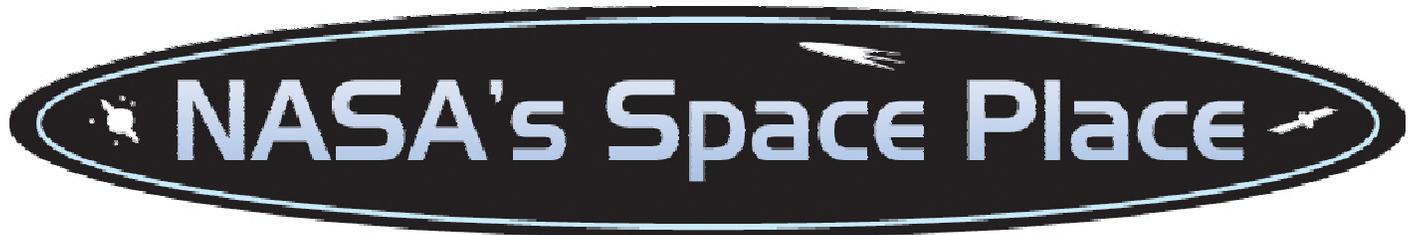
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Amateur Astronomer's Show the 2002 partial Eclipse to guest at the North Rim GCSP 2002. Who knows how many flames were fanned that day



Resisting Retirement: Earth Observing 1

By Patrick L. Barry

The Hubble Space Telescope isn't the only satellite that scientists have fought to keep alive beyond its scheduled retirement. Scientists also went to bat for a satellite called EO-1, short for Earth Observing 1, back in 2001 when the end of its one-year mission was looming.

The motivation in both cases was similar: like Hubble, EO-1 represents a "quantum leap" over its predecessors. Losing EO-1 would have been a great loss for the scientific community. EO-1, which gazes back at Earth's surface instead of out at the stars, provides about 20 times more detail about the spectrum of light reflecting from the landscape below than other Earth-watching satellites, such as Landsat 7.

That spectral information is important, because as sunlight reflects off forests and crops and waterways, the caldron of chemicals within these objects leave their "fingerprints" in the light's spectrum of colors. Analyzing that spectrum is a powerful way for scientists to study the environment and assess its health, whether it's measuring nitrate fertilizers polluting a lake or a calcium deficiency stressing acres of wheat fields.

Landsat 7 measures only 8 points along the spectrum; in contrast, EO-1 measures 220 points (with wavelengths between 0.4 to 2.5 μm) thanks to the prototype Hyperion "hyperspectral" sensor onboard. That means that EO-1 can detect much more subtle fingerprints than Landsat and reveal a more complete picture of the chemicals that comprise the environment.

As a NASA New Millennium Program mission, the original purpose for EO-1 was just to "test drive" this next-generation Hyperion sensor and other cutting-edge satellite technologies, so that future satellites could use the technologies without the risk of flying them for the first time. It was never meant to be a science data-gathering mission.

But it has become one. "We were the only hyperspectral sensor flying in space, so it was advantageous to keep us up there," says Dr. Thomas Brakke, EO-1 Mission Deputy Scientist at NASA's Goddard Space Flight Center.

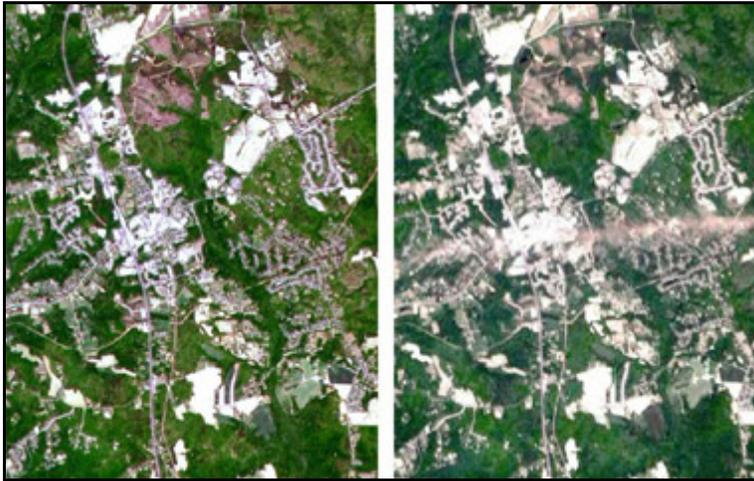
Now, almost three years after it was scheduled to be de-orbited, EO-1 is still collecting valuable data about our planet's natural ecosystems. Scientists have begun more than a dozen environmental studies to take advantage of EO-1's extended mission.

Topics range from mapping harmful invasive plant species to documenting the impacts of cattle grazing in Argentina to monitoring bush fires in Australia.

Not bad for a satellite in retirement.

Read about EO1 at eo1.gsfc.nasa.gov. See sample EO-1 images at <http://eo1.usgs.gov/samples.php>. Budding young astronomers can learn more at : spaceplace.nasa.gov/eo1_1.htm.

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



These images, made from EO-1 data, are of La Plata, Maryland, before and after a tornado swept through May 1, 2002.

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toward an obscure little greenish yellow dot in the sky, I was hooked. I had just discovered Saturn. Soon I was reading everything about astronomy I could get my hands on and eagerly awaited astronomical events. My enthusiasm diminished a bit as I realized a 60mm scope just wasn't going to see a whole lot of anything through the New York Skyglow. My epiphany was moving to Arizona. My interest renewed, I found SAC, and here I am. From not being able to find M42, I'm now half way to the Herschel 400.

Although I certain my story is unique, I'm sure there are common threads that bind the core group of members who are out under dark skies every month. What are they? Obviously, a love and appreciation of the night sky. I think we all still go "OOOOH" when we get under a really dark starlit sky. I know for me a night really isn't complete until I sit back and just look up for a while. I believe Thad refers to this a "getting a star tan"; I'll pass on the starlightblock, thank you.

Also a factor among the hardcore bunch is a goal-oriented mentality. Most of us have definite observing plans in mind when we go out telescoping. Whether we're working toward completing an observing project, like the Messier list or H400, or looking to catch that elusive 14th magnitude galaxy in Equuleus or split Sirius B, we have a plan and by God we're gonna stick to it! I've seen many folks join the club get out few times, maybe work through the Messier list and then their interest wanes. Why? Probably because, to them, they've accomplished "The Goal" and that's enough, time to move on to other pursuits. The difference between the groups is "What's next" vs. "That's it".

Then there's the time factor. Face it, most of need 25 hours a day, 8 days a week to get everything done. Squeezing time for a hobby can be hard to justify. I found that if the flame is

really there astronomy can be like a narcotic. You get a little in a t first, then you need more, so you borrow time from other things to get your fix. As long as this "addiction" is based in reality and doesn't take away from other things like family & work, great. The key is finding the delicate balance that lets you enjoy your hobby without feeling guilty about it.

Some pose the argument that money plays a role, and to appoint I suppose it does, I think it is a rather small role. After all a good pair of \$100 binoculars can take you a long way and challenge even the most experienced eye. Once purchased an 8" telescope can keep you busy and challenged for a long time, just ask A. J. who only recently retired his 8" after a mere 20 years! Amortize that out and the investment isn't that great. Add just few accessories as time goes by and you can certainly find new challenges.

And that, my friends is what it's about. Challenge. I think if people keep on challenging themselves a bit more, they realize that observing the Herschel 400 is not an impossible task, but rather one that will bring a great deal of satisfaction when A.J. hands you the award to the applause of the membership. If the challenge is gone from visual observing, branch out try your hand at astro-imaging. Imaging can be as simple as wide-field photography using a barn door mount, to CCD imaging. Recent advances in Web-cam have made imaging accessible to most anyone. Not a shutterbug, but people have always said you're "Good with your hands"? Why not try the ATM side of the hobby. Even if you don't aspire to grinding your own optics, creating a suitable ride for a good piece of glass can bring quite a bit of pride.

While you're at it, next time your out under dark skies, look for the new guy or gal. Walk over, introduce yourself and ask if they need any help. Answer questions and get to know them. I found the best way to light the flame of enthusiasm is to pass along some of yours.

Last Call For Observations—Ophiuchus

By A.J. Crayon

Ophiuchus is relatively easy to find. It is situated just above Scorpius and below Hercules with culmination at midnight just before mid-June. It is large covering almost 950 square degrees. All seven Messier objects found in this constellation are all globular clusters.

Of the two Messier globular clusters selected M10 is largest and brightest, 12.2 arc-minutes and mag 6.6 respectively. Check this against yours, or the following observations, to compare for yourself.

The sun is in this constellation longer than it is in Scorpius, but it doesn't have a sign for being a member of the Zodiac.

No one reported seeing the double star STF2096, also titled 19 Ophiuchi.

M107

For comparing against M10, M107 is 8.1 mag and 3.3 arc-minutes.

8" f 5.9, Dobsonian, 48x; Sheryl Gambardella: Faint and gradually brighter in center. Framed by 5 stars in a kite pattern. **120x**, few individual stars visible with averted vision.

8" f6, Newtonian at 200X; AJ Crayon: 5 arc-minutes in diameter, irregularly round, a flatter south side, very suddenly brighter middle, five stars seen across the face with averted vision. There were seven field stars from 10th to 12th mag.

10" F4.5 100X Ken Reeves: Pretty big, pretty bright, resolve about 50 stars over very granular haze, not a lot of brightening or condensation toward the middle. Real nice star pattern. Possible elongation E/W.

16" f4.4, Newtonian; Rick Rotramel: GC - fL, fB, fRi, loose even scattering of stars across object.

17.5" Dobsonian, 170x, Chuck Akers: Appears more open than most globular clusters, most of the foreground stars are easily resolved as individual stars. The inner area is an uneven fuzzy glow that I noticed with averted vision.

M10

M10 is one of Charles Messier own discoveries, having been found on the night of May 29, 1764. Part of his description read *in the belt of Ophiuchus ... beautiful and round.*

8" f5.9, Dobsonian, 48x; Sheryl Gambardella: Individual stars visible and bright intervening stars in field. Suddenly brighter with solid core. **120x**, Vague pattern of curved arms opposite sides of center.

8" f6, Newtonian, 200X; AJ Crayon: 10 arc-minutes but slightly oval in a northerly position. Many stars were resolved across the face, very compressed, slightly brighter middle, with several chains of stars visible in the core. There were 30 field stars from 10th to 13th mag. This globular cluster was also visible in the 8X50 finder as round and moderately faint.

10" F4.5 100X Ken Reeves: Pretty large, pretty bright, quite bright but even middle, outlying stars are dimmer threshold stars. No real bright stars like M-12, probably 30-40 stars. Field stars around it form a triangle stars pointing SSE.

17.5" Dobsonian, 170x, Chuck Akers: Bright and highly resolved globular cluster. The stars in the outer are easily resolved and the inner core area appears grainy and gives the appearance of depth.

IC4634

This IC planetary is a nice 12th mag, making it easy to observe from a reasonably dark site. It is described as 2a(3), which means it has a smooth disk with a brighter center. Sometimes is noted to have an irregular disk, that's from the (3). This is the Vorontsov-Velyaminov description for planetary nebula.

8" f6, Newtonian at 200X; AJ Crayon: 5 arc-seconds, 11th mag, very stellar; between three stars. The field has 50 stars from 10th to 15th mag. Called a dimensionless point by Pierre Schwarr.

10" F4.5 240X Ken Reeves: Extremely small, size barely noticeable at **240X**, slight greenish tinge to it. At **100X** it is stellar for all practical purposes, only identifiable with filter. Bright middle and very slight halo around it. Even at **240X** is it sub-stellar.

14.5" f5.2 Dobsonian, 140X; AJ Crayon: very small, bright, about 3 seeing discs.

17.5" Dobsonian, 170x, Chuck Akers: Very small planetary nebula that with averted vision appears to have a central star. At **277x** it really wasn't any better defined even though the conditions that night were good. UHC filter didn't bring out any more detail.

NGC6284

8" f5.9, Dobsonian, 48x; Sheryl Gambardella: Tiny and faint without individual stars. Mostly empty FOV. Tight gradually brighter center. **120x**, Faint stars resolved at edge. Several individual stars in cluster

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with averted vision. Seems slightly irregularly circular.

8" f6, Newtonian at 120X; AJ Crayon: 5 arc-minutes 10th mag with a gradually much brighter large middle with many stars resolved across the face. The field has 30 stars from 9th to 13th mag.

10" F4.5 140X Ken Reeves: Slightly small, fairly bright, much brighter middle, averted vision makes it grow slightly. Middle seems to be to the N. Very granular.

14.5" f5.2, Dobsonian, 180X; AJ Crayon: large, round, pretty bright with a gradually brighter middle; the outer halo of stars is faint with a hint of stellar resolution. With averted vision there is a suddenly much brighter middle, stars resolved in the halo with some faint stars almost involved.

16" f4.4, Newtonian; Rick Rotramel: GC - fL, fB, vRi, vmbMiddle, Round, Nice.

17.5" Dobsonian, 170x, Chuck Akers: A tight globular cluster with easily resolved individual stars along the outer region but had an undefined glow in the center with a slightly mottled appearance.

NGC6309, Box Nebula

Is an 11.6 mag planetary that seems to have a peculiar shape as indicated by its proper name. From astro-photographs it appears to be divided into two with the brighter side to the northwest.

10" F4.5 140X-240X Ken Reeves: 140X Very small, pretty bright star immediately to N. No detail seen. Fades away from middle. No annularity seen. **240X** occasional detail seen, possibly elongated N/S, but hard to tell with star.

14.5" f5.2, Dobsonian 290X; AJ Crayon: looking more like a rectangular nebula with a notch in the middle on the east side. With the UHC it becomes much brighter and remains the same size. The OIII makes it a little wider. This is actually a double nebula!

20" F5 450X Ken Reeves: Very small, pretty bright, bizarre shape, kind of rectangular, star to N makes it an exclamation point. Some mottling comes and goes with seeing, very unusual.

17.5" Dobsonian, 277x, Chuck Akers: Very small even at **277x** and has an odd rectangular appearance at the eyepiece at first but actually seems more long oval shaped after more observation. There's an obvious darkening in the inner region and the very blue star just to the north of the nebula. This is a small object, but still nice to look at in my opinion.

NGC6342

8" f5.9, Dobsonian, 48x; Sheryl Gambardella: Small,

faint. No individual stars. Gradually brighter, tight center at **120x**. Not significantly clearer than at **48x**. No individual stars.

8" f6, Newtonian, 100X; AJ Crayon: in center of large triangle of about 30 arc-minutes; this globular is 3 arc-minutes, 10th mag and is a little elongated in an unmeasured position.

10" F4.5 140X Ken Reeves: Pretty small, somewhat faint, slightly brighter in the middle, slightly brighter non-stellar nucleus. Averted vision extends halo somewhat. Granularity only suspected. Star to WSW. Round.

14.5" f5.2, 290X; AJ Crayon: shows a small brighter middle with many stars resolved around the halo.

16" f4.4, Newtonian; Rick Rotramel: GC - S, pF, Ri, fRound, bright sprinkling over fainter stars, bMiddle.

NGC6369, Little Ghost Nebula

This is a delightful 11th magnitude planetary nebula with a 14.7 mag central star. It is one of a number of planetary nebula that reminds observers of the larger, brighter and more famous Ring Nebula.

8" f6, Newtonian at 100X; AJ Crayon: pretty small, round and very faint. At **160X** was seen with averted vision only.

14.5" f5.2 at 140X; AJ Crayon: With the UHC the ring structure was evident as was the central star. The southern part of the torus was a little brighter than the remainder.

16" f4.4, Newtonian, 375X; Rick Rotramel: PN - S, fB, Round, ring shaped with void in the middle. **Greenish** color.

NGC6572

8" f6 Newtonian, 60X; AJ Crayon: stellar, very difficult to see. At **120X** it is less than 5 arc-seconds and 12.5mag. At **200X** it is round and bright.

10" F4.5 100X Ken Reeves: Very bright, pretty small, definite **bluish** tinge to it, averted vision doesn't do too much. **240X** even glow, possible elongation N/S, averted vision doesn't do too much, quite bright for this power.

14.5" f5.2, 280X; AJ Crayon: very small, pretty bright, round and seen as **green!** With averted vision and a UHC this planetary is slightly larger and appeared to have a faint halo.

16" f4.4, Newtonian, 375X; Rick Rotramel: PN - vS, B, Round, solid **blue** color across object.

20" F5 450X Ken Reeves: Extremely small, very bright, even but with a faint haze, **bluish** color. Central star seen occasionally, but uncertain.

20" f19, Refractor, 320X; AJ Crayon from Lines

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Astro Bits

By Thad Robosson

We've all had to cancel or abort an observing run for one reason or another. Mostly, you'll hear your fellow astronomy friends moaning about the clouds/weather, forest fires/closures, or the price of gas. Another common reason is family obligations. It is with this that I would like to introduce the concept of AstroPoints™. Once this is explained, many of you will nod your head in agreement as you realize that this is indeed the way things work for many households containing an astronomy buff.

AstroPoints™ are part of a system our ever-patient spouses and families use to allocate the time and money we can spend on our outings and projects. The term and rules were borrowed from another hobby and modified for use with astronomy related activities.

The key concept is that you have absolutely no control over your AstroPoints™. If you think you have enough, you probably don't. It is almost impossible to earn them, but there are as many ways to lose them as there are 14th magnitude or fainter stars. (Try forgetting her birthday or the kid's soccer game...!)

Numerical values are not used to keep track of AstroPoints™. For instance, you can't say, "I have 3000 AstroPoints™." That means absolutely nothing. Rather, relative terms are used. You could have amounts such as barely enough, almost enough, not even close or deep in the red when keeping track. An example of proper usage is: "I have barely enough AstroPoints™ for a 16mm Nagler." However, that is something of a delusional statement. The following is more likely, spoken in the past tense: "I had barely enough AstroPoints™ for a 16mm Nagler, but then our latest credit card statement arrived."

It is important to understand that AstroPoints™ will evaporate quickly. They have an incredibly short shelf life. Just because you have some today, doesn't mean you will have them tomorrow or even an hour from now. For example, in

anticipation of a Saturday night outing, you might have earned a bucketful of AstroPoints™ after you've mowed the lawn, did the dishes and even left your wife a little love note on the bathroom mirror. But later that day, the rattle in her car that you've been promising to take care of manifests itself with the engine stalling in front of the mall. Poof, all of your AstroPoints™ are gone. Even worse, you don't even have to cause the problem to lose your AstroPoints™. You could be printing out finder charts for that night's observing when the dishwasher floods the kitchen. Poof, all your AstroPoints™ are gone until the problem is fixed.

The only sure fire way to earn AstroPoints™ is to pretend to look at a major ATM project for sale, and then NOT buy it. They will be so relieved that collection of telescope parts will not be moving to your garage or closet. You will have a very narrow window of opportunity. You must be prepared to act quickly before the dog throws up, the kids start fighting or checks start bouncing. As a service to fellow astronomy buffs, I'm suggesting that owners of several project telescopes pretend to "sell" them to fellow astronomers in need of AstroPoints™. The "buyer" will bring the family along, and then "decide" not to buy. Flush with AstroPoints™, the "buyer" will take the scenic way home and "happen" to drive by the telescope shop. It is critical to remember that this is not the time to haggle over price or buy something on sale. You can always scrounge up more money somehow (Look under "Plasma Centers" in the Yellow Pages), but not so with AstroPoints™. You have to seize the moment once you've earned them.

I hope that this helps many of you understand the subtleties of our fragile astronomy relationship with our spouses. Armed with the information above, you can now set course for multi-night outings, new eyepieces, and dream telescopes while maintaining a happy family situation.

October 2004

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Schedule of Events for September & October 2004

Sep. 11th	SAC Star Party at Cherry Rd. Sunset 1840, Ast Twilight Ends 2005, Moonrise 0405
Sep. 14th	Moon is new at 1429 mst.
Sep. 21st	Moon at first quarter at 1554 mst.
Sep. 21st	ATM & Astro Imaging Subgroup meetings at Precision Guitar at 1830. Directions on page 11.
Sep. 22nd	Autumnal Equinox at 1629 mst.
Sep. 24th	SAC General Meeting at Grand Canyon University at 1930. Speakers: Steve Coe and Michael Schwartz of the Tenagra Observatory--Steve will teach us about supernovae and Michael will tell us about his telescope and how he discovers them.
Sep. 28th	Moon is full at 1309 mst.
Oct. 6th	Moon at last Quarter at 1012 mst.
Oct. 9th	SAC Star Party at Flat Iron: Sunset: 1804, Ast Twilight: 1927, Moonrise 0256
Oct. 14th	Moon is new at 0248 mst
Oct 15th -16th	All Arizona Star Party at the Farnsworth Ranch. For more information, Go to: http://www.eastvalleyastronomy.org/aasp.htm
Oct. 20th	Moon is at First Quarter at 2159 mst.
Oct. 23rd	Fall Public Star party at Thunderbird Mountain Park in Glendale. Contact Jack Jones for more information
Oct. 26th	ATM & Astro-imaging Sub group meetings at Precision Guitar at 1830. See page 11 for directions.
Oct. 27th	Total Lunar Eclipse, 1st contact at 1814, Totality from 1923 to 2044, 4th contact 2153
Oct. 28th	Moon is Full at 0307 mst.
Oct. 29th	SAC General Meeting at Grand Canyon University at 1930: Speaker: Tom, The Namibia Kid, Polakis on observing the southern Skies

Bits & Pisces: Minutes of the General Meeting July 31, 2004

Recorded By Joe Macke

The meeting was called to order at 1937MST by President Thad Robosson. There were 42 attendees. This was the first-ever-in-collective-memory second meeting in a single month, a Blue Moon meeting.

1. Thad welcomed the assembly and asked if there were any guests in attendance. There was one.
2. The treasurer was absent. In his stead, Thad reported that the club is still solvent. The secretary missed the actual account balances.
3. Prez Thad was selling some tripod stuff and books.
4. Jack Jones announced that he has All-Arizona and club T-shirts. The club shirts come in both blue and sand. All shirts are \$15.
5. Jack also updated the members on the Clear-Sky Clock that the club sponsors. Due to our sponsorship, the Cherry Road clock is updated more often than average.
6. Thad passed out several club name tags.
7. Newsletter editor Rick Tejera reported that the electronic version of the newsletter is available and the printed copies will be mailed next week. He also has flyers for the Orange County event.
8. Steve Coe had an eyepiece for sale and will be hosting a party at his house tomorrow evening (August 1.)

9. Show and Tell:

- a. Steve Coe showed 34 images from a variety of star parties, including a picture of former club president Dave Fredericksen's pickup truck being towed.
- b. Steve Dodder presented the video animations from his talk last meeting. He had had a problem with them then.
- c. Glen Nishimoto showed 29 pictures of the Venus transit and his associated trip to Turkey.

A sort break was called at 2022MST.

The meeting reconvened at 2046 with 42 attendees. Steve Coe announced that the projector the club is using is on loan from DeVry until they need it to replace one in a classroom.

Jennifer Keller introduced the evening's speakers, Dave Healey & Doug Snyder. Dave observed the entire transit from Alaska, north of the Arctic Circle. At 2113MST, Doug reported on his trip to France for the Venus transit and the International Workshop on Cometary Astronomy in Paris.

After the talks, everyone was invited to eat and continue astronomy talk at JB's at the corner of Northern and 35th Avenue.

The meeting adjourned at 2137MST.

Thunderbird Park Fall Public Star Party

Yes, it's that time of year again. This year's fall Public Star Party at Thunderbird Park will be held on Saturday, October 23rd. The moon is waxing Gibbous (83% phase), and it is a planet poor time, but there will still be plenty of bright objects to show off to appreciative folks.

Sunset is at 1744, so set up will be about 1/2 prior to that. For more information, contact Jack Jones (his info is in the masthead). Park Rangers will be available to direct you once in the park

For Directions see page 11

From the Editor

Just a quick note for new members (and old) about how to best ensure your issues of SACnews arrive how you want them. There have been quite a few folks with changes of address & other info, including changes in newsletter delivery information.

First, if you change your address, please notify our Treasurer, Al Stiewing. He maintains our membership database. Copy me **only** if you get your newsletter delivered via regular mail.

If you receive your newsletter via e-mail and have a change of e-mail address, notify Paul Dickson, with a

copy to me. Paul maintains the SACnews mailing list on the freelists server. He will update your information. The newsletter notification should come uninterrupted if you follow this procedure.

If you'd like to change your newsletter delivery preference, Let both Paul & myself know so we can adjust our lists accordingly. Copy Al as well.

You can find Al & My contact info in the masthead of this issue, Paul can be reached at: dickson@Permanentmail.com or 602-841-7044

(Continued from page 5)

Observatory: 5" 10th mag, very blue and fuzzy around the edges.

Call for Observations

For October check out these deep sky objects in Cygnus – the Swan. They consist of NGC6826, NGC6883, NGC6960, NGC6992, IC4996, NGC7026 and NGC7048. Also take a look at Herschel 1470 whose position is RA 20 03.6, Dec +38 19 or about four degrees southwest of gamma (γ) Cygni. Finally, see if you can observe chi (χ) Cygni, a pulsating variable with a magnitude range from 3.3 to 14.2.

With November bringing cooler and cooler nights but a summer Milky Way that just doesn't seem to want to go away; let's make Cepheus the target. Starting out with the non-stellar objects, let us know what you see for NGC 40, NGC 6939, NGC 6946 that is actually on the border between Cygnus and Cepheus, NGC 7142, NGC 7160 and IC 1396 which also contains the open cluster Trumpler 37. The famous delta Cephei serves as our double. What colors do you see? Don't be afraid to tell us because what you see is what you see and nobody can tell you different!

So I picked up this disk of glass in a flea market...has a nice brass ring around the edge, so I made a coffee table out of it. Only thing is, it's slightly bulged out, so nothing sets flat on it. ...Have no idea where it came from, but it has a brand of some sort on the brass ring, see. Says "Alvan Clark".



The following cartoon by Jack Kramer appeared in a past issue of the Lake County (Illinois) Astronomical Society monthly newsletter, NightTimes. It is all original work, and has never been published professionally.

Reprinted here with the permission of the author and the Lake County Astronomical Society:

<http://www.bpccs.com/lcas/index.html>

Such-A-Deal

For Sale

Celestron C8 GPS with Starbright coatings (standard). I bought this scope back in June just in time for Mars Mania. It has the standard equipment. The tripod is new and still in the box. I will also include an Orion Lens Shade and a Kendrick Hartmann mask. You can see the scope and examples of the images I have taken at:

<http://glory.gc.maricopa.edu/~pmaxson/index.htm>. The corrector plate needs cleaning on the inside from it's exposure to an unforecast rain shower back in early December. Celestron charges \$100 plus shipping for the cleaning. From the web page you can see that it has not affected performance. I paid over \$2200 for the setup and for the mentioned reason I am asking \$900. I still have the original shipping boxes.

Also, I have a Kendrick Hartmann mask for a C11 and am asking \$40 for it.

Contact: Paul Maxson, sunspot51@cox.net, 623-975-9232

For Sale:

Starsplitter Dobsonian telescope: 12.5"; f 4.5. Enhanced Nova optics. Very bright star field. Cost \$2500 5 years ago. Sell for \$1000. Contact Wayne or Alana @ (623) 386-2553.



For Sale

Celestron NexStar 5i with 25mm and 10mm eyepieces, tripod, Celestron Star Pointer, AC adapter and long heavy-duty extension cord. The telescope has hardly been used. Like new. With carrying bag. Saving for a digital SLR. \$800.00

Call Damion at 602-240-5421 damionbow@aol.com.

For Sale

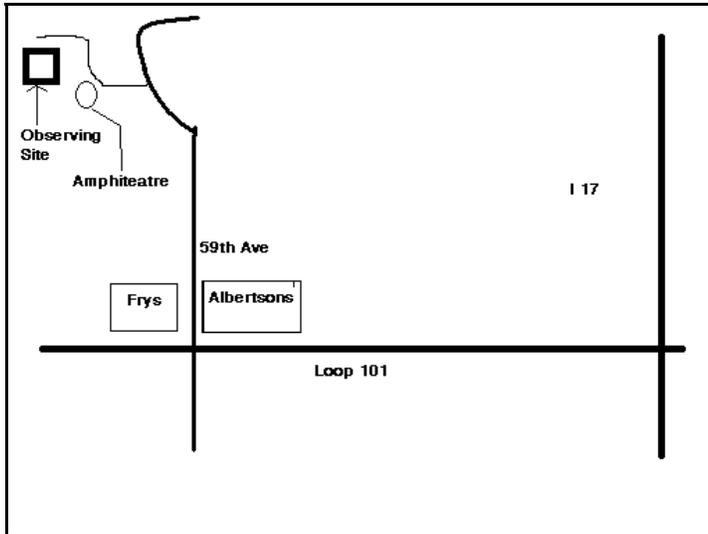
Meade 12.5" dob, New, used once. 6x30 finder scope, 1 3/4" focuser, 1 eyepiece. Paid \$930, asking \$650.

Call Barry at (480) 3455090, or after 5:00 pm, (480) 838-1909.

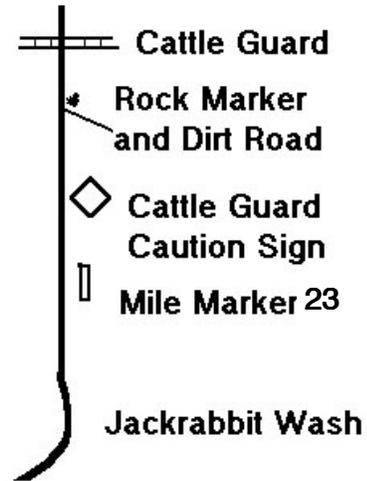
SAC Meeting and Observing Sites

Thunderbird Park

Take the Loop 101 to 59th Ave. Turn North onto 59th Ave. (toward the Albertson's & Fry's Supermarkets) go about 1 1/2 miles on 59th Ave. until the road starts to climb the hill. The entrance to the park is on the left, 4/10 of a mile past the light at Deer Valley Rd. Go to the right of the amphitheater and follow the signs to the sight. Rangers will be there to guide you if you get misplaced (easy to do if you've never been there)



Flatiron Star Parties

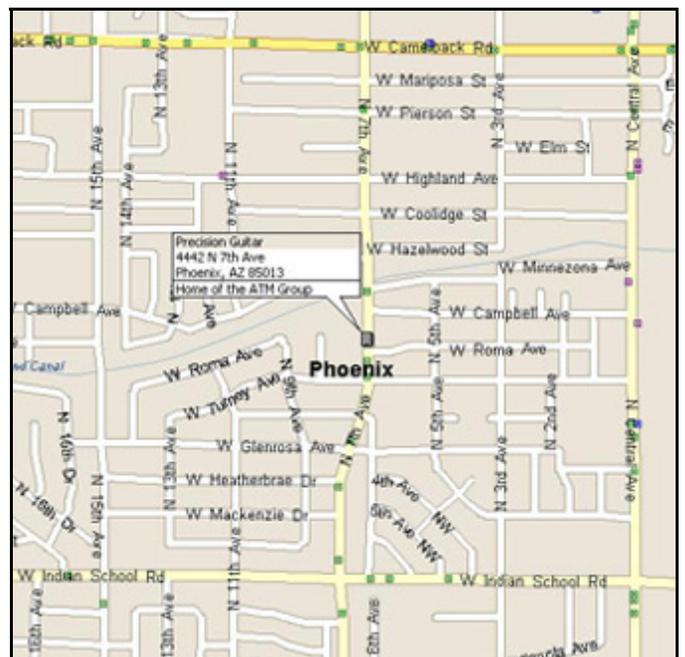


Head west on I-10 to the 339th Ave exit (exit 103). Turn North (right) and go two miles to Indian School Rd. Turn West (left) on Indian School and go 2 miles to 355th Ave. Turn North (right). This will turn into Wickenburg Rd. Follow this road for about 12 miles. Just after mile marker 23 you will go 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).

ATM & Astro-Imaging Subgroup Meetings

The ATM (Amateur Telescope Making) and Astro-Imaging sub groups meet at Thad's Shop, Precision Guitar, on the Tuesday before the General meetings. The address is: 4442 N. 7th Ave, Phoenix. To get there:

Precision Guitar, is located at 4442 N. 7th Ave, suite # 6. Specifically, this is the SOUTHWEST corner of the STOPLIGHTED intersection at 7th Ave and Campbell. (Campbell is 1/2 mile SOUTH of Camelback, and 1/2 mile NORTH of Indian School) The suite on the end sports a large "Allied Cabinet Refinishing" sign on the front of the facade. We are further in (west) at suite 6. Please see <http://www.precisionguitar.net/ShopSatPhotoA.jpg> for a bird's eye view map.....



SAGUARO ASTRONOMY CLUB

September 2004

5643 W. Pontiac Dr
Glendale, AZ 85308-9117

Phone: 623-572-0713
Fax: 623-572-8575
Email: newsletter@saguaroastro.org



Videmus Stellae



SAC Schedule of Events 2003-2004

SAC Meetings

Jan 9th, 2004	Jul 2nd, 2004
Feb 6th, 2004	Jul 30th, 2004
Mar 5th, 2004	Aug 27th, 2004
Apr 2nd, 2004	Sep 24th, 2004
May 7th, 2004	Oct 29th, 2004
Jun 4th, 2004	Nov 19th, 2004

ATM & Astro-Imaging Group Meetings

Jun 29th, 2004	Jul 27th, 2004
Aug 24th, 2004	Sept 21st, 2004
Oct. 26th, 2004	Nov. 16th, 2004

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Jan 17, 2004	1747	1915	0429	F
Feb 14th, 2004	1814	1938	0327	F
Mar 13th, 2004	1839	2002	0328	F
April 10th, 2004	1859	2025	0124	F
May 15th, 2004	1924	2103	0404	C
June 12, 2004	1942	2127	0234	C
Jul 10th, 2004	1943	2126	0105	C
Aug 7th, 2004	1924	2058	2335	C
Sep 11th, 2004	1840	2005	0405	C
Oct 9th, 2004	1804	1927	0256	F
Nov 6th, 2004	1734	1859	0141	F
Dec 4th, 2004	1723	1851	0027	F

F= Flat Iron; C= Cherry Road