



# Sacnews

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November 2002

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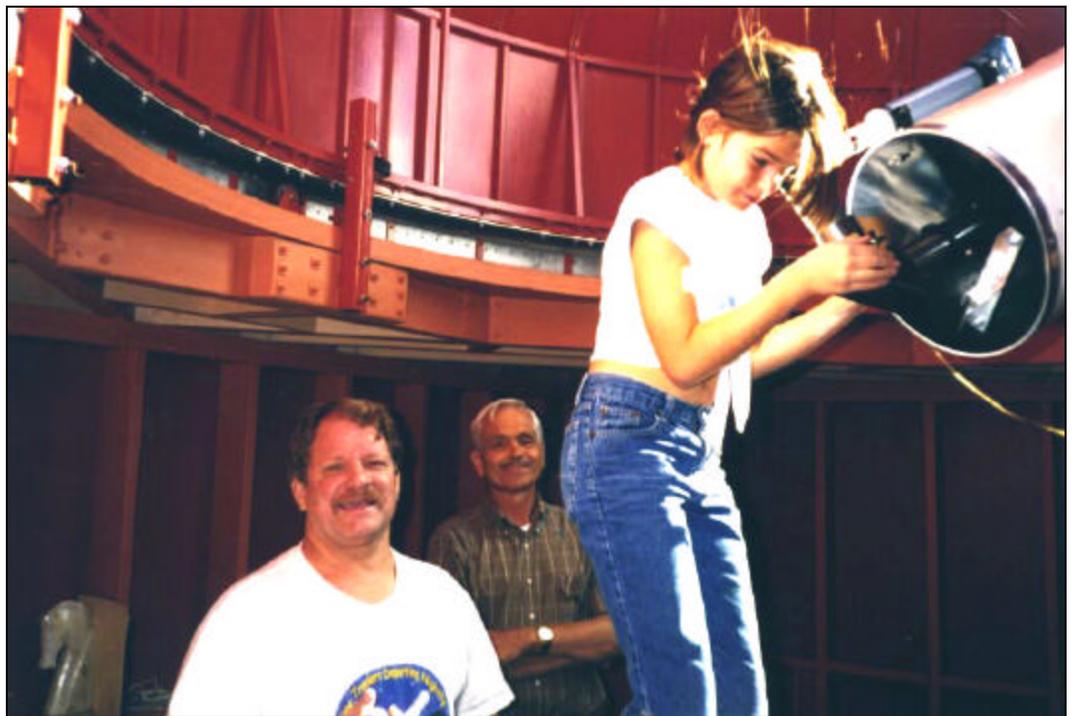
## Profiles: Stan Gorodenski & The Blue Hills Observatory

By Jennifer Keller

Well, honestly I tried writing this up like a "Profiles" but couldn't make it fit the format without making Stan sound like he was bragging about himself (he wasn't, I had to pry words out of him with a fork mount!). So I will write this in my own way so I can brag about Stan—a quietly amazing amateur astronomer who decided to build an observatory by himself one day. . .

Back in 1983, Stan decided to go to the Riverside Telescope Makers Conference to enter the telescope he bought in 1976 from his friend, Bill Laumaster, an expert machinist who "enjoyed building the scope more than he enjoyed astronomy": A wonderful 12.5" Coulter Optics Mirror, f15 Dall-Kirkham. The mount/drive promptly won the Merit Award and Stan has gone to the RTMC every year since.

(Continued on page 3)



Mary Keller looks through the eyepiece at the Blue Hills observatory. In the background are Jack Jones (left) and Stan Gorodenski .



## Black Holes: Feeling the Ripples

Astronomers have finally confirmed something they had long suspected: there is a super-massive black hole in the center of our Milky Way galaxy. The evidence? A star near the galactic center orbits something unseen at a top speed of 5000 km/s. Only a black hole 2 million times more massive than our Sun could cause the star to move so fast. (See the Oct. 17, 2002, issue of Nature for more information.)

Still, a key mystery remains. Where did the black hole come from? For that matter, where do any super-massive black holes come from? There is mounting evidence that such "monsters" lurk in the middles of most galaxies, yet their origin is unknown. Do they start out as tiny black holes that grow slowly, attracting material piecemeal from passing stars and clouds? Or are they born big, their mass increasing in large gulps when their host galaxy collides with another galaxy?

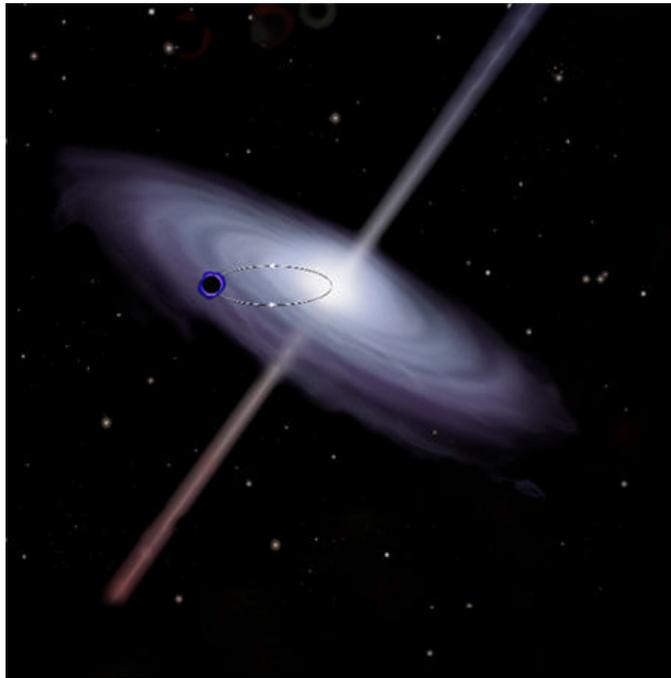
A new space telescope called LISA (short for "Laser Interferometer Space Antenna") aims to find out.

Designed by scientists at NASA and the European Space Agency, LISA doesn't detect ordinary forms of electromagnetic radiation such as light or radio waves. It senses ripples in the fabric of space-time itself--gravitational waves.

Albert Einstein first realized in 1916 that gravitational waves might exist. His equations of general relativity, which describe gravity, had solutions that reminded him of ripples on a pond. These "gravity ripples" travel at the speed of light and, ironically, do not interact much with matter. As a result, they can cross the cosmos quickly and intact.

Gravitational waves are created any time big masses spin, collide or explode. Matter crashing into a black hole, for example, would do it. So would two black holes colliding. If astronomers could monitor gravitational waves coming from a super-massive black hole, they could learn how it grows and evolves.

Unfortunately, these waves are hard to measure. If a gravitational wave traveled from the black hole at the center of our galaxy and passed through your body, it would stretch and compress you by an amount far less than the width of an atom. LISA, however, will be able to detect such tiny compressions.



LISA consists of three spacecraft flying in formation—a giant triangle 5 million km on each side. One of the spacecraft will shoot laser beams at the other two. Those two will echo the laser signal right back. By comparing the echoes to the original signal, onboard instruments can sense changes in the size of the triangle as small as

0.000000002 meters (20 picometers).

With such sensitivity, astronomers might detect gravitational waves from all kinds of cosmic sources. The first, however, will probably be the weightiest: super-massive black holes. Will "feeling" the ripples from such objects finally solve their mystery, or lead to more questions? Only time will tell. Scientists hope to launch the LISA mission in 2011.

(Continued from page 1)

It was in that same year of 1983, that Stan commenced following every amateur astronomer's dream of owning some dark skies with an observatory and a home; or maybe the story could be that he just wanted to build a really neat place for his champion telescope. After scouting many plots and checking many acres, he decided precisely on N34° 31.89' W112°18.11', ten beautiful acres nestled in the Blue Hills of Dewey Arizona in-between the Mingus and Bradshaw Mountains. Scenic daytimes and panoramically great dark skies by night at nearly a mile high elevation. And of course I must mention the weather is the same as our beloved Cherry Road Site.

Setting his priorities straight (as all amateur astronomer's are keen at doing), Stan built his observatory first, living in the bottom part of it while completing it and before starting on his house. Between RTMCing, observing, working, & commuting the 75 miles from Phoenix it took nearly 7 years to build the entire structure by hand, alone. It is 16 feet square, 2 stories, 16 feet high not including the dome which is >11' diameter, magnificent, and solid, and how he built this by himself would even make Frank Lloyd Wright wonder.

Nineteen RTMCs from his first, Stan's Blue Hills Observatory and home are complete and

wonderful and Stan has since retired and is hunkering down to get into some serious Photometry—Stan's primary astronomical interest.

Stan's degree is in Genetics and his other interests include evolutionary biology and Lepidoptera—butterflies and moths. So it is easy to understand his reason for pursuing Photometry. Stan "likes to get involved with science and photometry affords an opportunity to accumulate and analyze data to understand the causes of the variations in a star's light".

Stan also enjoys the deep sky with his favorite object being the Orion Nebula because of the tremendous amount of detail in it. (I would have pegged his favorite as M6 for some reason.)

And when it is cloudy Stan will be changing out his mount and drive to a new one more conducive to photometry, finish up a few things on his dome & home, and read astronomy books.

Stan's other somewhat astronomical and somewhat an interest is in Mercury Comets—but that's a story for a different kind of newsletter.

Oh, and his "Quote I live by"?: "If people knew how hard I had to work to gain my mastery it wouldn't seem wonderful at all." Michelangelo.

## Novice Group Observing Session Postponed

Due to inclement weather and common sense on behalf of the Novice Group Chairman, Steve Coe, The Novice Group Session originally Scheduled for October 26th, was postponed.

Steve has indicated he has rescheduled the session for Saturday, Jan 25th, 2003. Moon rise is 0204, so plan on sticking around and getting some observing in after the twilight talk.

Sunset is at 1755, so plan on arriving before 1700, so Steve can give his talk in twilight and have plenty of time for questions & answers. The Flat Iron site is about an hours drive from central phoenix so plan accordingly.

If you get any astronomical presents as holiday gifts, be sure to bring them along, we'll be happy to show you how to get the most out of them.

# Fuzzy Spot, Cassiopeia

By Ken Reeves

Last month we looked at Cepheus, the King. This month we will look at his wife, Cassiopeia. This prominent "W" or "M" shape in the sky is loaded with open clusters, including two Messier objects. In addition, there are several nebulae and a few galaxies, including two companions of the great Andromeda galaxy. With all there is to see, let's skip the mythological information and get right into observing Cassiopeia. All of these observations were made in my 10" F4.5 scope.

NGC 129 (00 29.9 +60 14): Our first of many open clusters is very large, pretty bright, pretty rich, but not very condensed. There is a bright star to the S of cluster, a nice clump of 7 fairly bright stars on the S side of cluster (N of the star), then going N, the cluster fans out to a whole bunch of loose stars. I saw 4 levels of stars and estimated a count of about 45 stars.

NGC 147 (00 33.3 +48 30) and NGC 185 (00 39.0 +48 20): These galaxies are companions to the Andromeda galaxy. NGC 147 is pretty large and pretty faint with a low surface brightness. Use averted vision to best view this object. It is slightly brighter in middle and is elongated N/S. NGC 185 is pretty bright, pretty large, and slightly brighter in middle. The halo is somewhat faint; using averted vision makes it come out. There is a possible elongation N/S.

NGC 225 (00 43.4 +61 47): This open cluster is pretty bright, pretty big, and quite loose. I saw 3 levels of stars with a count of 26 stars. The cluster has a nice shape but is poor in stars.

NGC 281/IC 1590 (00 52.8 +56 37): This is a poor open cluster surrounded by a nice nebula. The central star is a nice triple surrounded by about 10 stars, which is presumably the cluster. The nebula responds quite well to a UHC filter. It is very large and fairly bright around the central star. To the S is a dark area almost forming a V. I saw some mottling and dark lanes throughout the nebula, with bits of detail. The NE side fades away pretty gradually, and to E of the cluster is a dark lane running N/S.

NGC 381 (01 08.3 +61 35): This open cluster is somewhat faint, pretty large, pretty rich and pretty condensed. It contains 2 levels of stars with some unresolved haze in the background, using averted vision helps pull out some more stars. I counted about 27 stars plus the threshold stars.

NGC 457 (01 19.1 +58 20): This cluster is most commonly called the Owl Cluster, but I've also heard it referred to as the Kachina Cluster. It is an absolute wow! The two bright stars are white/yellow and white/blue. I saw 5 levels of stars and another level on the edge of resolution. I counted 76 stars plus more with averted vision, not counting the stars in the 'feet' area.

NGC 559 (01 29.5 +63 18): This open cluster is fairly small and pretty faint. There are 3 bright stars over a layer of fainter stars, which in turn is sitting on an unresolvable, very granular haze. Using averted vision and moving the scope makes much of the haze resolve. The cluster is elongated NE/SW. I was able to count about 20 stars with averted vision; many others pop out with the seeing.

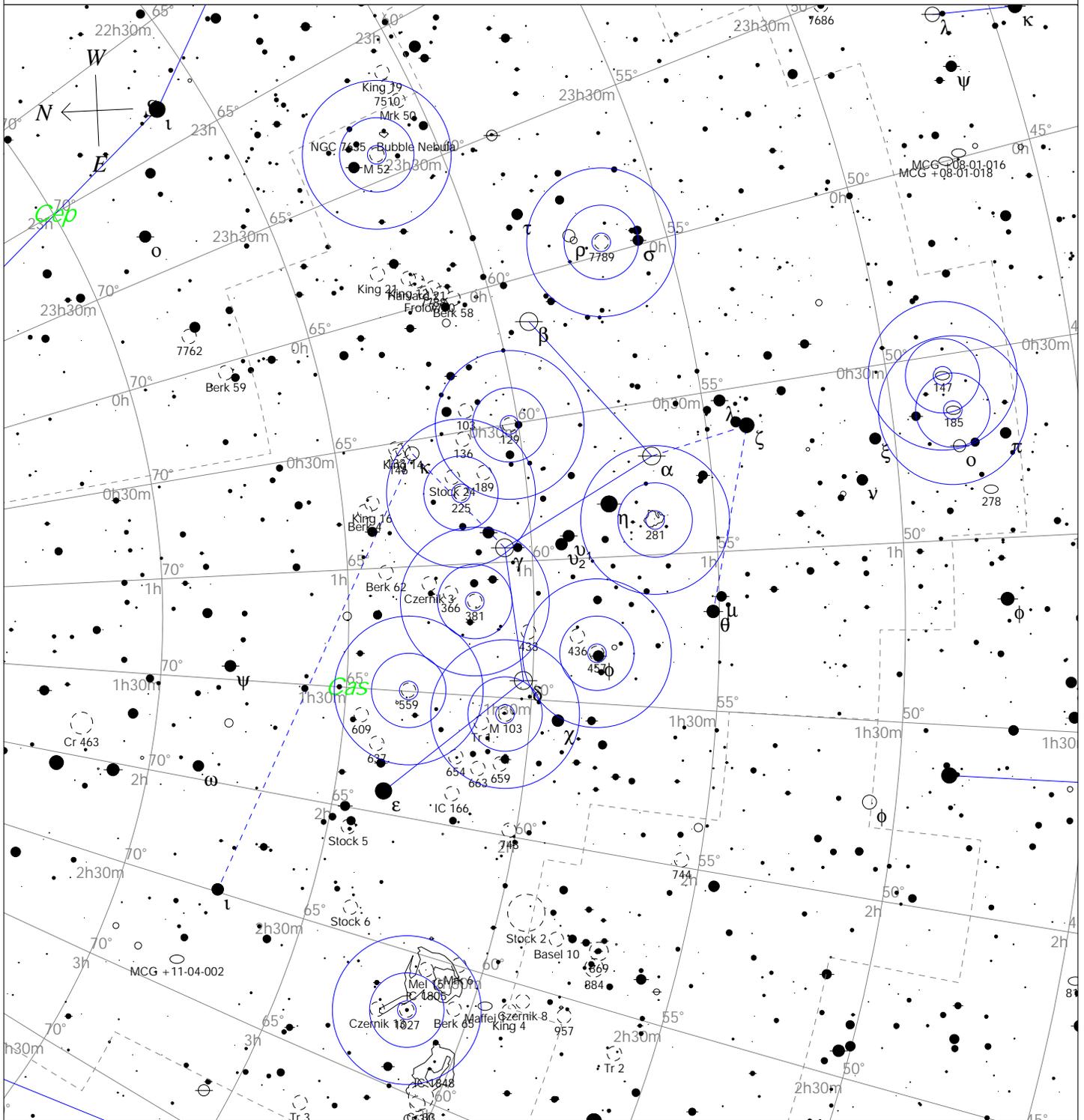
NGC 581 (01 33.2 +60 42): M-103 is the first of the Messier cluster we come to in Cassiopeia. I see it as small, pretty bright, and a little condensed. It is a nice grouping of stars with a nice wide yellow and blue double on the SE side, and blue star on the NW side. There are 5 levels of stars with about 20-30 stars resolved. The range of stars and color contrast makes this a nice cluster.

NGC 1027 (02 42.7 +61 33): This cluster is bright, very large, very rich, not condensed, and elongated NW/SE with a "bump" on NE end. I saw 4 levels of stars including a very bright star in middle, and counted at least 100 stars. It is hard to tell where the edge of the cluster is.

NGC 7654 (23 24.2 +61 35): Swinging all the way back to the W end of the cluster brings us to the second Messier cluster, M-52. It is very large, very bright, and very rich. There is a very bright star pair on the SW side. I see 4 levels of stars over some haze, and counted 94 stars plus a faint group of about 25 stars to E. This is a very glorious cluster, which for some reason I tend to forget about.

NGC 7789 (23 57.0 +56 44): The last cluster here is one of the best in the skies. It is very large, not real bright, very rich, very compressed. I see 3 levels of stars over an extremely granular haze that pops out with averted vision and good seeing. I counted about 75 stars plus at least another 50 threshold stars. There are several voids in cluster. Don't pass this cluster by.

# Fuzzy Spot Cassiopeia



## STARS

- <3
- 4
- 5
- 6
- 7

## SYMBOLS

- Multiple star
- Variable star
- ☄ Comet
- Galaxy
- Bright nebula
- Dark nebula
- ⊕ Globular cluster
- Open cluster
- Planetary nebula
- Quasar
- △ Radio source
- × X-ray source
- Other object

*Herschel 400 Objects: 129, 136, 185, 225, 278, 381, 436, 457, 559, 637, 654, 659, 663, 1027, 7789, 7790*  
*SAC's 110 Best of the NGC Objects: 185, 281, 457, 663, 7789*

## Seeing Double

### By Thad Robosson

During a recent thread on AZ-Observing about estimating seeing, Brian Skiff posted a link to one of the documents at the Lowell Observatory web site. At 95 pairs strong, this isn't a list for those who like easy splits. Brian's intended purpose of the list is for use while estimating seeing conditions, and as such, the list contains pairs with separation from .32" (very tight for ANY amateur telescope) to 8.9" (pretty easy for ANY amateur telescope). Here's the idea.... when you head out at night to observe, to get an idea of what kind of conditions you're up against, start your session by hunting down a few of the pairs on the list that are just above you and your 'scopes' limit. For example, I know that I can split a .6" pair in my 8"f/6, so I started out by trying a few .8" pairs, and came down to .5". By doing this, I was able to make a better estimate of seeing than just "guessing." On this particular night, I gave the seeing an 8 of 10 that later went down to 7 of 10. Pretty good considering a major storm had just passed through earlier that day. This isn't the fastest way to estimate the seeing, but many may find it to be a bit more accurate. Even if you don't care to track down a few of these at the start of your session, you will find this list to be fun to attempt. You can find the list at:

<ftp://ftp.lowell.edu/pub/bas/dbls.fil>

Here are some of the notes from my session that night....

Observer: Thad Robosson; Location: Twin Points Observatory, Phoenix, Arizona, USA, 33 26.725N, 112 18.902W

Equipment Used: 8"f/6 Newtonian on EQ mount, 10mm, 13mm, & 15mm Vixen Lanthanum, 22mm & 35mm Televue Panoptic, 2x shorty Barlow, 5x Televue PowerMate, Celestron Microguide, Custom built filar micrometer.

Date/Time: Oct 26, 2002; 20:25:57

Conditions: Moist, rained hard earlier today. Roof of Observatory is dewy already, and you can feel the dew in the air. Appears very steady for such a turbulent day. Trans is nice as well, but not great. Initial impression is 8/10 seeing, and 4~5/10 trans.

Ambiance: Fall evening, quiet for a Sat. nite. No real ambiance tonite. Going to try a few off the list the Brian Skiff posted on the Lowell web site that he uses to test seeing conditions.

Name: p Aquila, 6.3, 6.8; Sep. 1.4; PA 107; Date/Time: Oct 26, 2002; 20:38:10

EP/Magnification used...10mm/120x

Notes: Very tight pair, but seen as split at 120x. Seeing is cooperating nicely. PA noted near 250\*. 240x is doable, but seeing almost doesn't support it. A little jumpy, but easily split.

Harshaw Scale: 3

Name: 16 Vul, 5.7,6.0; Sep 0.82; PA 122; Date/Time: Oct 26, 2002; 21:00:39

EP/Magnification used: 5mm, 240x

Notes: Two bright points dancing at roughly PA 325\*. Very tight, but observed as split. Notes indicate a .8" sep. Not too much challenge.

Harshaw Scale: 2

Name: 24 Aqr; 7.1,7.7; Sep 0.53; PA 273; Date/Time: Oct 26, 2002; 21:02:59

EP/Magnification used; 5mm, 240x, 15mm w/5x Barlow, 400x, 10mm w/5x Barlow, 600x

Notes: Elusive. Just noted a figure 8 at 600x. Seeing just isn't quite steady enough. I believe that on a near perfect seeing nite, I could get this one. Was able to discern a PA of 100\*, which is well matched to the noted PA of 273\*.

Harshaw Scale; 3

Name: 72 Peg; 6.0,6.0; Sep 0.55; PA 94; Date/Time; Oct 26, 2002; 21:31:02

EP/Magnification used: 5mm, 240x, 10mm w/5x Barlow 600x

Notes: Brighter than 24 Aqr, and more equal, but not seen quite as double. A few split seconds of suspect, confirmed by PA noted at roughly 90\* (PA is 94\*). Seeing seems to have gone down some.

Harshaw Scale: 3

Name: e Equ; 6.0,6.4; Sep 0.81; PA 285; Date/Time: Oct 26, 2002; 21:58:53

EP/Magnification used: 5mm, 240x

Notes: A nice multiple. The C component is notably bluish at PA 70\*, while the AB pair is very equal white at PA 280\*. Very pretty, and well within reach with the seeing dropping some. (now about 6/10)

Harshaw Scale: 2

Name: 36 And; 6.0,6.4; Sep 0.89; PA 309; Date/Time; Oct 26, 2002; 22:15:28

EP/Magnification used; 5mm, 240x

Notes; A lovely tight yellow pair easily split at this power. PA noted at 315\*. Very distinct and quite a sight. Not too challenging though.

Harshaw Scale: 2

If you would like to submit observations of any doubles for me to post, please contact me at

[starcracker@qwest.net](mailto:starcracker@qwest.net)

# November 2002

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

## Schedule of Events for November 2002

Nov. 2nd	Harlow Shapley born in 1885. Gave the first accurate size estimate for the Milky Way and was director of the Harvard College Observatory. He died in 1972
Nov. 4th	New Moon at 2034 mst.
Nov. 11th	Moon at first quarter at 2052 mst.
Nov. 15th	SAC general meeting at Grand Canyon University at 1930. Guest Speaker: A.J. Crayon will discuss Sketching Your Deep Sky Observations
Nov. 15th	William Herschel Born in 1738
Nov. 19th	Apollo 12 lands on the moon in Oceanus Procellarum. Astronauts Pete Conrad & Alan Bean return with part from Surveyor 3 which landed in 1967
Nov. 20th	Moon is full at 0134 mst.
Nov. 20th	Edwin Powell hubble born in 1889
Nov. 27th	Moon at last quarter at 1546 mst.
Nov. 30th	SAC Star Party at Flat Iron Site, Sunset 1723, Ast twilight ends 1851, Moonrise 0410

## Future Planning

March 1st-2nd, 2003	Sentinel Schwaar Star-gaze at Sentinel. Note this date has been changed from May 3rd, 2003
Mar. 29th-30th, 2003	2003 All Arizona Messier Marathon at Arizona City. It's a new moon and all 110 objects are visible.
May 1-3 2003	Desert Sunset Star Party, Kartchner Cavern State Park. See <a href="http://chartmarker.tripod.com">http://chartmarker.tripod.com</a> for more information

# Bits & Pisces

## Minutes of the Sep 20th, 2002 General Meeting

### By A.J. Crayon

President David Fredericksen called the meeting to order with the standard call for visitors and new members to stand and identify themselves. Three people did so and indicated their background and interest in astronomy.

Next Paul Dickson gave the treasurer's report: \$906.00 in checking; \$2356.00 in savings and \$1353.00 in Grants and Scholarships; income was \$0.77 interest in savings and \$0.44 interest from Grants and Scholarships.

Rent for meeting room for the next six months was paid but we need to keep looking for another meeting venue—preferably one with better audio-visual aids.

Paul is also kicking off a membership drive to get as many members renewed before 2003 as possible. The current meeting is the first of the last three meetings this year so please use the new SAC membership form to make this process as easy as possible for our treasurer. The membership form is available at the meeting or on the web at: <http://www.cybertrails.com/~dickson/sac.membership.services.form.pdf> (ed note: The membership form will also be in the newsletter.)

Several members attended the Northern Arizona Star Party and gave reports. David Fredericksen said it was well attended, dark and had lots of lightening. Steve Dodder called it a mud bog because of all the rain. He also gave a talk about his variable star observing interests. Bill Peters gave a talk about meteorites and meteor wrongs.

Steve Dodder also announced he and wife Rosie were inviting all members to a pot luck dinner at Stone Haven Observatory on November 2nd and indicated he was lining up Joe Orman and Rick Scott for presentations and slides.

AJ Crayon announced the REACH-11 star party hosted by the Maricopa Parks and Recreation Dept to be held

on Saturday, October 19th. If you plan on attending see the newsletter for directions and if you bring a telescope plan on arriving around 5:15pm.

Steve Coe announced the October 26th SAC Star Party at Flat Iron would be a novice group activity. We will show up early to give us time to answer any and all questions. Remember, at this type of activity, no question is too simple and none are stupid. In fact you don't need to bring a telescope to show up and ask questions.

Gene Lucas announced the All Arizona Star Party, being held on the property of Ray Farnsworth, on October 4th and 5th at the site near Arizona City, AZ. The long dirt road to the site is in good condition and there will be a port-a-potty available both Friday and Saturday. Also a swap meet will be held on Saturday afternoon.

For the first time your secretary can remember there were no Show-n-Tells; so we decided to take an early break.

After the break Tom Polakis had a quick Show-n-Tell about his trip to the Oregon Star Party. It is a 22-hour drive from Phoenix, so plan on making it a two-day drive. The site, in eastern part of Oregon has no sky glow, as it is in a desolate, save pine trees, part of the state. The star party is well structured and well behaved; has public showers, cafeteria and snacks that include espresso! There was more than enough room for the 800 attendees. Yes 800!

Next our vice president, Diane Hope, introduced our main speaker for the evening. It is a return engagement by Ted Dunham as his last visit was in May this year. He gave an update on the Sofia project but his main topic was A Search for Habitable Planets. It was well received and many questions were asked afterwards.

A J Crayon, SAC Secretary

# Bits & Pisces

## Minutes of the October 18th, 2002 General Meeting

### By A.J. Crayon

President David Fredericksen called the meeting to order; during this time a head count of 60 people was taken. A request for visitors and new members to stand and introduce themselves resulted in seven volunteers; some even had family members with them.

Treasurer, Paul Dickson, announced we had \$1058.74 in checking; \$2456.76 in savings, about \$198.00 cash on hand and \$1253.59 in Grants and Scholarships.

He also requested if there were any more interest in All Arizona Star Party T-shirts. Unfortunately the five wasn't enough for the minimum 24 shirts. He also announced SAC T-shirts would be available in the near future.

Paul also discussed the membership forms for next year and urged members to renew as soon as possible.

Gene Lucas discussed the Observers Handbook for 2003, if he can order 20 or more, then the cost will be \$15.00. About 20 members indicated an interest in the book and about 15 from East Valley Astronomy Club. He will order about 40 books and sell as many as possible, with the prospect that SAC could purchase unsold books. Paul Dickson moved we vote, Rick Tejera seconded, and it was voted on and passed.

David Fredericksen discussed up coming events, some of which will have passed by the time this is printed and read. They include public star party at REACH-11, our novice star party at Flat Iron, elections and Christmas Party.

Offices needing candidates are Vice-President and Secretary. Steve Coe's name was put up for VP and Jennifer Keller for Secretary. The slate of officers for next year then is:

David Fredericksen:	President
Steve Coe:	Vice President
Paul Dickson:	Treasurer
Jennifer Keller:	Secretary
Rich Walker:	Properties

First time in several years we have a full slate of candidates by October!

Steve Coe discussed the novice group meeting for the

October 26th star party at Flat Iron. He suggested leaving early to arrive in time for a twilight talk.

Jack Jones presented the first and second Lunar awards for observing 110 Best Lunar Objects. The first award went to Joe Goss and the second to Jack Jones.

AJ Crayon discussed REACH-11 (over by the time of this writing), the upcoming Deep Sky Meeting, which will cover the summer constellations Cygnus and Cepheus. Members were reminded of the 2003 All Arizona Messier Marathon for Saturday, March 29, 2003 at the site near Arizona City, Arizona.

Adam Sunshine discussed a public start party at Thunderbird Part for May 10, 2003 - be sure to mark your calendar for this one!

Steve Dodder invited members to a potluck star party at Stone Haven Observatory for Saturday, November 2, 2002. Arrive about 4:00pm for chow and be prepared for short programs featuring Joe Orman and others. This promises to be a fun event.

For Show-n-Tell, Jack Jones showed some recent and some archived slides from Grand Canyon Star Parties and invited members to start preparing for the June 2003 event. For more information see Jack.

Chuck Young showed some astrophoto slides, the results of which convinced him to make a custom wedge, with assistance for the active ATM group. Once he began using the wedge his photographs improved! We look forward to great astrophotographs in the future.

After the break Steve Coe, acting for Diane Hope, introduced the evenings speaker. He is the well know southern Arizona imager David Healy. The title of his talk, "Astrophotography and How Not to Do It." Basically he gave an excellent review of Murphy's Law in action. The law simply states that "if anything can go wrong, it will" and is attributed to Air Force Captain Edward A. Murphy. David's discussion and slide show included foot binaries and nose spirals. You had to be there to enjoy the definition of these objects and the humor.

# Bits & Pisces

## Minutes of the October 18th board Meeting

### By A. J. Crayon

The Board Meeting was opened by President David Fredericksen with the following in attendance: Steve Coe, Thad Robosson, Derek Poertner, Rick Tejera, Stan Clark, Paul Dickson, Joe Goss, Jack Jones, Rich Walker, AJ Crayon and the following gentlemen whose last name escapes the Secretary, John.

AJ Crayon spoke about the upcoming All Arizona Messier Marathon and covered the following topics; our web site will have complete coverage, Jack Jones will again assist, the newsletter size article is due to begin next month. There will, also, be a request for members to assist incoming participants to slow their vehicles if too much dust is being disturbed. There shouldn't be much trouble having members serve 30-minute intervals from 4:00pm to 6:30pm with sun set at 6:49pm.

Next David Fredericksen presented us and discussed a letter from Steve Kadel of the Applied Sciences Department at Gendale Community College. The letter is to the Space Telescope Science Institute requesting a grant for 2003-2004 to assist high school teachers in science and physics classrooms. It will require teachers to be trained in observational astronomy using 6inch Dobsonian telescopes, which they will build using grant funding. Here's where we, SAC, come in; they need our

help with the construction of the telescopes and learning basic observational skills.

To this end David requested a special membership for their requested 12 members per year for two years (that's 24 members) at a cost of \$15.00 per year. It would include all rights of a regular membership. After some discussion to clear up some points, AJ made the motion for the Board to vote, Paul seconded, it was voted on and unanimously passed.

At this time Derek Poertner and Jack Jones discussed T-shirts. They would cost members about \$15.00, consist of the same basic design, but with different colors - selected by the purchaser prior to purchase. For purchase a Newsletter type form would be available on the web site and at meetings for members to order and pay in advance. The design would be similar to the one made for the All Arizona Star Party and would have the constellation Scorpius on the front instead of the SAC logo. Derek said he would have a sample for the November meeting for the Board to decide upon.

In response to polo type shirts, they indicated that could be done at a later time.

## Holiday Party Time!

**What: The Sac Holiday Party**  
**When: Saturday December 7th,**  
**2002**  
**Time: 7:00 p.m.**

Once again as the holidays near, it's time for the annual soirée, known as the SAC Holiday Party. This year's gala will be held at the site of the Twin Points Observatory, namely Thad Robosson's House.

As usual it is a pot luck party, so plan on bringing a dish or two for all to enjoy.

I'm sure if we all ask nicely Thad will give us a tour of the Twin point's Observatory.

Directions are given to the right and will be posted on the SAC web-page:



From the I-10 Loop 101 Stack head west to 115th Ave. Turn left (south) and go to Van Buren). Turn right on Van Buren and go about 1/2 mile to W Links Drive and turn left. Turn right immediately onto N. Clubhouse Dr. Go .2 miles and turn left onto W Adams. Thad's House is .2 miles on the right. The address is: 11909 W. Adams Street, Avondale, AZ, 85323 If you get lost call 602-826-0328.

## Club Elections

According to the Club's constitution, we are required to hold elections for officers annually. The time is upon us again.

The Constitution allows an officer to serve two consecutive terms in a position after which a new officer must be elected. This year we two positions in which the incumbents have reached their term limit. They are Vice-President and Secretary. The officers holding the positions of President, Treasurer and Properties Director have all decided to run for re-election.

Nominations were opened at the Oct. 26th meeting.

At this time nominations were taken and seconded for the following candidates:

President: David Fredericksen (incumbent)

Vice-President: Steve Coe

Secretary: Jennifer Keller

Treasurer: Paul Dickson (Incumbent)

Properties: Rich Walker (incumbent)

Nominations will be taken for any other candidates wishing to run for one of these offices at the November meeting. At the close of nominations, an election will be held for any position with two or more candidates. If no further nominations are accepted, then the slate as shown above will be accepted.

At this time lets all remember to thank our two out-going officers, Vice-President Diane Hope, who provided many entertaining speakers and Secretary A.J. Crayon, whose minutes have kept us all well informed as to the club's business.

Thanks go as well to the incumbent officer for their contributions and willingness to continue to serve.

Remember, the club is only as good as the people in it (which is why we have such a great club), but we need involvement. Please take the time to consider running for an office. This is your opportunity to help keep our club strong and active.

## Such A Deal

For Sale: 8" f6 Newtonian telescope on German Equatorial Mount! This telescope has many extras, amongst them are 8X50 finder right angle finder, drive corrector, crude teflon tube rotation system, tube weights and 12 volt battery for the drive corrector.

This sale also includes an eye piece box and the following parfocal Erfle eye pieces; 20mm, 15.5mm and 12.4mm. A 2X to 3X barlow. Two orthoscopes 10.5mm and 7mm and, finally, a 25mm Modified Achromat.

Includes owner's manual for telescope and drive corrector.

The mirror and drive gears were just cleaned.

All for \$550.00

Must sell to finance already built 14.5" Dobsonian.

Call AJ at 602.938.3277 or e-mail: [acrayon@mindspring.com](mailto:acrayon@mindspring.com) for details.

SAC!! I am in search of new homes for two Telescopes. They are a Meade 8" LX-90 properly equipped and a Celestron 11" Ultima that is about 8 to 10 years old in a case with a wedge for photography. Both scopes are in good condition and ready to use. Price is

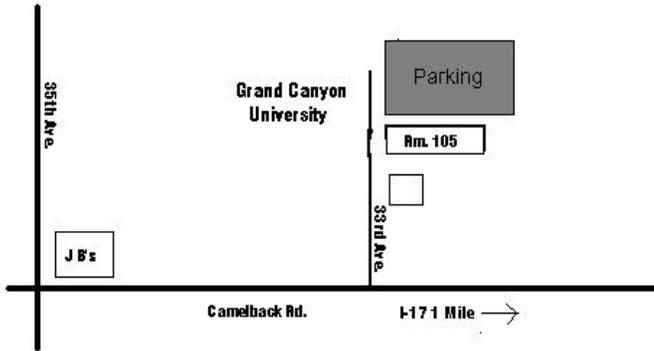
negotiable but will be in the range of \$1200.00 for the 8" and \$1800.00 for the 11". If anyone has an interest in either one call me at 480-730-1132 and we will chat.

Dave Coshow

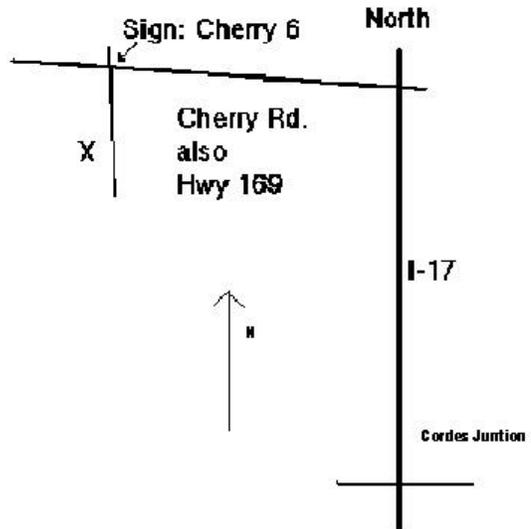
# SAC Meeting and Observing Sites

## General Meetings

7:30 p.m. at Grand Canyon University, Fleming Building, Room 105: 1 mile west of I-17 on Camelback Rd., North on 33rd Ave., Second building on the right.



## Cherry Rd. Star Parties



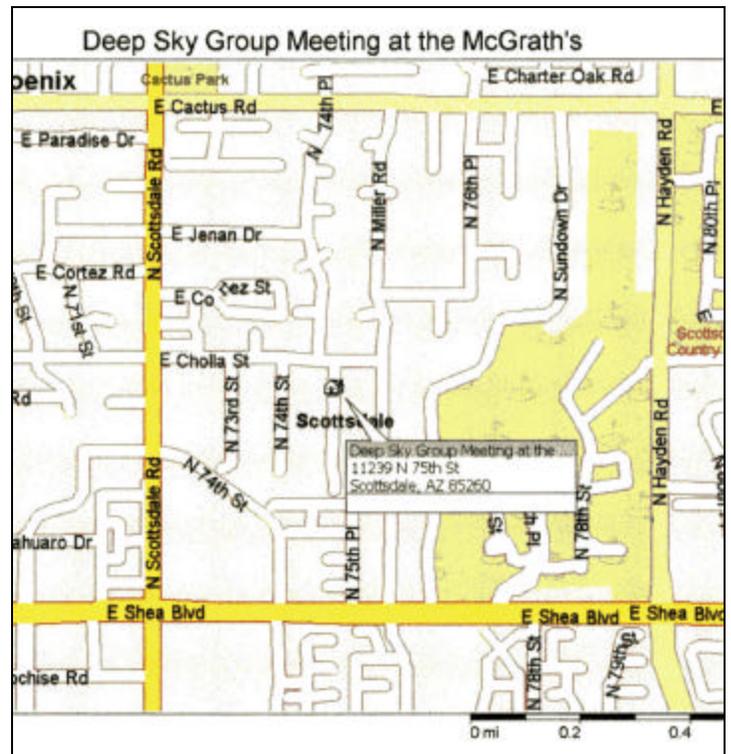
## Flatiron Star Parties



Take I-17 north to the Cherry Rd exit. Turn west (left) and continue on Cherry Rd for about 5 miles. Turn Left on the dirt road just past the sign that says Cherry 6. Note you turn in the direction Opposite the arrow on the sign. The site is 1/2 mile in through a fence on your right. Please close the gate behind you and make sure it remains closed at all times

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 1 mile 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.

## Deep Sky Group Meeting



## 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 Membership
- \$ 7.50 Nametag for members  
(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 \$30.00/yr
- Astronomy \$29.00/yr

Please Print

Make Check Payable to : SAC

Name: \_\_\_\_\_

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

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

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

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

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

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

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

### Sac on the Internet

SAC has several E-mail mailing lists. If you check the boxes below, the E-mail address above will be subscribed to that list.

- 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

November 2002

5643 W. Pontiac Dr  
Glendale, AZ 85308-9117

Phone: 623-572-0713  
Fax: 623-572-8575  
Email: SaguaroAstro@aol.com



Videmus Stellae

It's not too early to think about renewing your membership for 2003. Early renewal will ensure you don't miss an issue of SACnews. It will also ease the treasurer's workload during the busy renewal season. You can also update the club regarding any changes of address, e-mail, newsletter delivery preference etc. Use the form on page 11 of this issue. While you're at it, you may as well renew your magazine subscriptions as well.



## SAC Schedule of Events 2002-2003

### SAC Meetings

Oct. 18th 2002	Apr 18th, 2003
Nov. 15th 2002	May, 14th, 2003
Dec. 20th 2002 (Holiday Party)	June 13th, 2003
Jan 17th, 2003	July 11th, 2003
Feb 14th, 2003	Aug 8th, 2003
Mar 14th, 2003	Sep 12th, 2003
Oct 10th, 2003	Nov 7th, 2003

### Deep Sky Group Meetings

Oct. 24th 2002	May 29th, 2003
Dec. 26th 2002	July 17th, 2003
Jan 23rd, 2003	Sep 18th, 2003
Mar 20th, 2003	Nov 13th, 2003

### SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise	Site
Oct 26th, 2002	1745	1909	2136	F
Nov 30th, 2002	1723	1851	0410	F
Dec 28th, 2002	1731	1900	0305	F
Jan 25th, 2003	1755	1921	0204	F
Feb 22nd, 2003	1821	1944	0105	F
Mar 22nd, 2003	1844	2007	0004	F
Apr 26th, 2003	1910	2040	0412	F
May 24th, 2003	1930	2111	0239	C
June 21st, 2003	1944	2130	0107	C
July 19th, 2003	1939	2120	2333	C
Aug 23rd, 2003	1905	2034	0330	C
Sep 20th, 2003	1828	1952	0113	C
Oct 18th, 2003	1754	1917	0005	F

F= Flat Iron; C= Cherry Road