

Saguaro Astronomy Club



Sacnews

Volume 25 Issue 6

June 2001

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Inside this issue:

Electronic Newsletter to debut	1
Messier Marathon Final Results	2
Fuzzy Spot, Centaurus	4-5
Seeing Double	6
Calendar of Events	7
Presidents Message Bits & Pieces; Minutes of the April Meeting	8
Membership Info	10-11

Electronic Newsletter Distribution to Begin

As has been discussed in this newsletter and at the past few meetings, SACnews will be migrating to an electronic distribution, via e-mail. The changeover is scheduled for the July issue, due out before the June Meeting. This will be the last newsletter that is distributed solely in print form. The change was forced by a dramatic increase in printing costs and was supported by a majority of the membership. To accomplish the change, the board approved the purchase of Adobe Acrobat at a cost of \$256.00 to be used to convert the newsletter files to *.pdf format, readable by anyone with e-mail access. You will need to have a copy of Adobe Acrobat Reader, which is a free-ware program, and is now available for download from SAC's website (thanks Steve & Bob). The link is on the SACnews Online link, just click the Acrobat icon and this will take you to the appropriate spot on Adobe's website. Follow the instruction for your computer and OS and install, and you'll be able to open the newsletter files. So far average file size has been between 300-500 KB, about a 1-2 minute download, depending on your connection speed.

The newsletter prints very well in this format and looks much better than the copies that we've been used to. In addition, the *.pdf files are in full color, something that has been cost prohibitive in the past.

In order to ensure that everyone who wants to participate (and I encourage

you to do so) receives their newsletters, I will be sending mailings out to all current members. If I have an e-mail address on file for you, you will receive a card with your current address. Please check it. If it is correct do nothing, you'll automatically get your newsletter before the general meeting as an attachment. If it is incorrect, or you wish to keep getting your newsletter via snail mail make the necessary corrections and mail back to me. The card will be pre-addressed.

If I do not have an e-mail address on file, you'll receive a similar card requesting your address. Once again please mail the card back to me so I can add you to the distribution list.

I am also in the process of archiving all old newsletters. They will be uploaded to our website in *.pdf form in the near future. I will also upload an index file for each year of newsletter I have on file. This will make it easier for you to find the issue with the information you want.

I'm excited at the possibilities electronic distribution will open up for SACnews and hope you'll find the changes an improvement over snail-mail. Once again remember, if you do not want to get your newsletter e-mailed, return the card indicating so, and I'll continue to mail your copy.

Clear Skies
Rick

2001 All Arizona Messier Marathon

By A.J. Crayon

The 2001 All Arizona Messier Marathon, held Saturday, March 24th, was the most successful one to date being attended by about 91 folks, 79 scopes, a comparable number of vehicles, a Kit Fox and one very vocal mocking bird. Attendees came from Colorado, New Jersey, Oregon, Ohio and Ontario (yes Canada!). Oh yes there were many from Arizona.

The short story is 25 folks found all 110 objects! Twenty others found 100 or more and 11 more found less than 100 followed this up. See the final standing for more details.

Many Arizonans, including myself, started out the festivities by arriving a day early for some extra observing fun. Amongst them was Bill Ferris who used the time for practicing for the marathon and wound up finding all 110. He also found 110 the next night; talk about dedication! Has anyone observed all 110 on one night and followed it up with the same feat the following night?

While Friday night was excellent many began to question their wisdom during the day Saturday as the high thin clouds moved in and stayed.

Steve Coe left about mid afternoon believing the weather wouldn't get any better. A few hours later and around 30 minutes before sunset we were all rewarded with a clearing sky and to the west at that. A Special thanks to Steve for taking the clouds with him. Naturally everyone was quite happy, then came sunset followed by evening twilight and the marathon was on!

Jennifer Keller, Jack Jones and others treated the landowner, Ray Farnsworth and his son-in-law Eric Kinney to their own private star party. They were continually surprised by the views through all telescopes.

Using my new 14.5" f5.2 telescope, M77 was more difficult than expected but after my nervousness was replaced with averted vision it was easily seen. After that it became much easier for the remainder of the catalog save M30. Just before morning twilight it was not visible, but then I was not used to using averted vision. Once my vision was averted it was seen but was tougher than M77. This was the first time I found all 110.

After having finished the Virgo cluster and having some time I walked around the observing field. I got a chance to view M101 and M3 through Brian Skiff's 70mm Pronto. Needless to say the stars were pinpoint images all around the field of view, including the very edge of

the field. We also spent a few moments discussing the merits of NGC5866 replacing M102, Messiers' duplicate observation of M101.

Margaret McCrea from Rose City Astronomy Club set up her 60mm refractor next to me, we exchanged some nice views between our scopes and had a couple of nice short discussions. If only we had more time to talk, but this wasn't the time. Perhaps another time?

Gary Garzone of Longmont Astronomy Club, Colorado almost never made it to the marathon. He was visiting in Phoenix, decided to attend and called my house early Saturday for directions. Fortunately, my wife found the directions on the computer and e-mailed them to him.

Ken Schmidt, from Cleveland, Ohio was just so happy to be amongst so many observers, he was justifiably proud to have found all 110.

The smallest optics to see M77 and M74 was Brian Skiff's 70mm Pronto. The smallest to see M30 was Marshall Dailey's 5" SCT. Of special note was Brent Archinal observing all 110 in 11X80 binoculars, a testament to the kind of night sky all enjoyed! David Frederickson bagged all 110 for the second time, the first being 1996.

There are just too many people to mention everyone but here is a list of astronomy organization from outside of Arizona, Longmont Astronomy Club, Colorado; Amateur Astronomers Association of Princeton, New Jersey; Royal Astronomical Society of Canada, London Chapter, Ontario and the Rose City Astronomy Club, Oregon.

From Arizona there were our old standbys and some surprise new ones. Amongst all of them were East Valley Astronomy Club, Tucson Amateur Astronomical Association, Sun City West Astronomy Club, Raytheon Amateur Telescope Makers, Steward Observatory Mirror Lab, Stone Haven Observatory, Lowell Observatory, the USGS Flagstaff and of course Saguaro Astronomy Club.

Now for the credits. First to Ray Farnsworth for letting us use his grounds for our observing site and for making a long dusty road passable for family sedans and large motor homes alike. Everyone who showed up regardless of whether they participated in the marathon or not. Steve Coe for taking the clouds with him. Jennifer Keller for circling the entire site to gather counts names and locations used in this article and still took part in the marathon and Jack Jones for much appreciated help.

2001 All Arizona Messier Marathon Final Results

Num	Name	Scope	Org.	Missed or Comments
110	Kirk Alexander	16" newt	AAP	
110	Brent Archinal	11x80 Binos	CAS	
110	Jim & Delia Brix	16" Dob	TAAA	
110	Andrew Cooper	6" f5.2 Newt	TAAA	
110	AJ Crayon	14.5" f/5.2 Dob	SAC	
110	Marshall Dailey	5" Mak	SAC	
110	Bob & Pat Davidson	8" f/6 Dob	EVAC	
110	Steve & Rosie Dodder	8" SCT	SAC	
110	John Evelan	20" f/4.5	EVAC	
110	Bill Ferris	10" f/4.5	None	Saw 110 Night before
110	Dave Fredericksen	12" f/6 Dob	SAC	2nd Perfect Marathon
110	Jack Gelfand	16" Newt	AAP	
110	Joe Goss	10" SCT	SAC	
110	Jack Jones	14.5" Newt	SAC	
110	Harold Judson	9.25" Newt	EVAC	
110	Dean Ketelsen	11.25" Newt	TAAA/SAC	
110	Frank Kraljic	10" f/5.4 Dob	EVAC	
110	Derrick Lim	8" f/4 Newt	EVAC	
110	Tom Polakis	10" Dob	EVAC/SAC	
110	Ken Reeves	20" f/5 Dob	SAC	
110	Thad Robosson	8" f/6 newt	SAC	
110	Sam Rua	20" f/5 Dob	TAAA	
110	Ken Schmidt	14.5" f/4.3 Dob	CV	
110	Doug Smith	8" SCT	TAAA/RATM	
110	Matt Spinelli	8" SCT	EVAC	
109	Sam Herchak	13.1" Newt	EVAC	74
109	Mike Lerch	Unknown	SAC	74
109	Brian Skiff	70mm Pronto	Lowell Obs.	30
109	Wayne Thomas	20" Dob	SAC	74
109	Charles Whiting	13.1" Dob	SAC	30
109	Don Wrigley	16" f/5 Dob	EVAC	77
108	Chuck Akers	8" Dob	SCW	74,30
108	Kevin Bays	8" Dob	TAAA	74,30
108	Scott Keroeppler	6" f/8	AL	74,30
108	Rick Rotramel	16" f/4 Newt	SAC	74,30
108	Ken Sikes	10" f/6.3 SCT	SAC	74,110
108	Dave Steiner	8" SCT	SAC	74,30
108	Chuck Young	Unknown	SAC	74,33
107	Tom Mozden	14" Dob	SAC	74,33,30
107	Steve Ratts	7" MakNewt	EVAC	72,73,30
106	Rick Tejera	8" f/6 Dob	SAC	75,72,73,30
105	Bill Lofquist	8" Dob	TAAA	77,74,72,73,30
103	Robert Gardner	15x45 Binos	SAC	74,110,76,75,72,73,30
103	Wade Holguin	8" SCT	Unknown	74,110,55,2,72,73,30
101	Brian Page	9.25" SCT	EVAC	110,39,55,75,15,2,72,73,30
99	Jon Milan	5" SCT	EVAC	
97	Diane Hope	10" Dob	SAC	
96	Margaret McCrea	60mm Ref	RCA	
93	Randy Ocheltree	8" SCT	SAC	
87	Jennifer Keller	10" Dob	SAC	
76	Joe Macke	8" SCT	SAC	
68	Dawn Schur	8" f/5 Dob	SAC	
67	Robert Hutchins	15" f/4.5 Dob	EVAC	
67	Robert King	10x50 Binos	RCA	
51	Pat Heimann	11" SCT	TAAA	
50	Jim Deck	8" f/6 Dob	SAC	
42	Wayne Powers	11" SCT	none	

Fuzzy Spot, Centaurus

By Ken Reeves

Centaurus represents the creature of a Centaur, which has the body of a horse but the upper torso, heads, and arms of humans. Centaurs are normally monstrous and wicked creatures, but Chiron, who is preserved in Centaurus, was mild mannered, famous for his abilities in music, poetry, mathematics, and medicine.

Centaurus is a large southern constellation that unfortunately doesn't completely make it above the southern horizon for observers in Arizona. It contains Alpha Centauri, the closest star system to our solar system, which never makes it above the horizon. However, two of its famed objects, the great globular cluster Omega Centauri, and the peculiar galaxy and radio source Centaurus A are easily visible.

My observations in Centaurus are limited, so some of these observations are taken from the great book "The Night Sky Observer's Guide" by George Robert Kepple and Glen W. Sanner.

NGC 4373 (12h25.3 -39 44): The Night Sky Observer's Guide gives this galaxy a rating of 4 stars. For 12 to 14" scopes at 125x, it is described as "NGC 4373 has a stellar nucleus embedded within a large bright core which is surrounded by a much fainter halo elongated 2.5' X 1.5' NNE/SSW. A 13th magnitude star is on the halo's north edge. 2' SW of NGC 4273 is its companion galaxy IC 3290, a faint glow elongated 1' x 0.5' NE/SW."

NGC 4696 (12h48.9 -41 18): Another 4 star galaxy in the Night Sky Observer's Guide, is described for a 12/14" Scope at 125X as "NGC 4696 has a fairly bright circular 3' diameter halo with a faint stellar nucleus. 13th magnitude stars are 1' NW, 1' SW, and 1' SE of the nucleus on the edge of the galaxy's halo. NGC 4706 is 12' ENE and NGC 4709 is 15' ESE of NGC 4696."

NGC 5128 (13h25.3 -43 01): This is the peculiar galaxy Centaurus A. In the 10" scope at 100X, I saw it as somewhat bright, pretty big, with a very unusual shape, kind of like pac-man. The dark lane is most prominent on the SE side. There is a little brightening towards the middle with the brightest portions being on the edges of the dark lane which runs NW/SE. I first swept across this

galaxy when looking for Omega Centauri, and thought it was a nebula, not a galaxy. In the 20" scope at 150X, I saw it as very large, pretty bright, and round with a very prominent dark lane running WNW/ESE. Down the middle of the dark lane is a bright streak, quite unusual. There is one star on the W end of the dark lane and another star involved in the S half. The southern half of the galaxy is brighter, with both halves fading to the E.

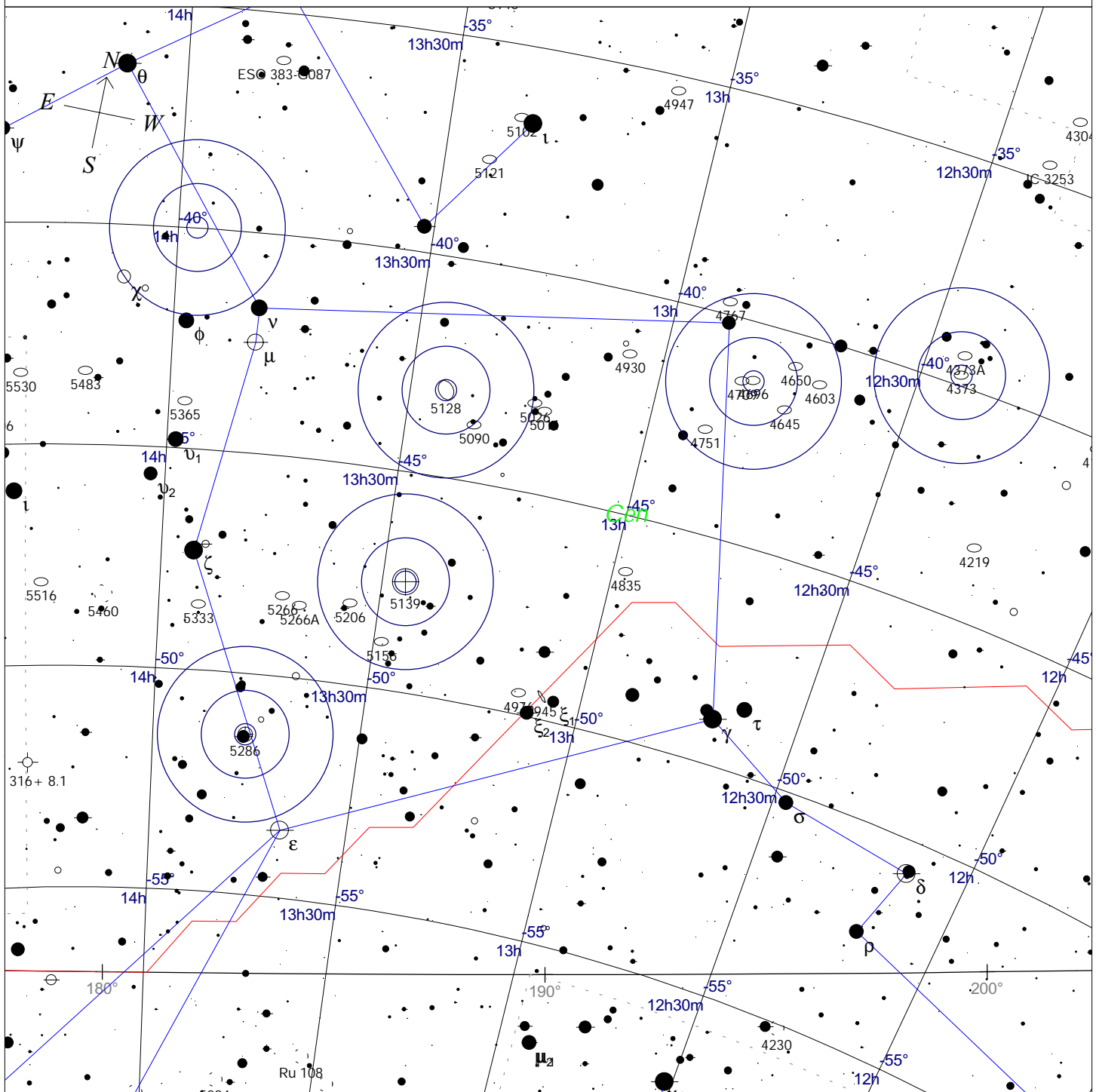
NGC 5139 (13h26.8 -47 29): In the 10" scope at 100X, Omega Centauri can only be described as WOW! It almost completely fills the 35' field of view. I roughly estimated that 200-300 stars were resolved over a slightly granular haze. The halo quickly then slowly brightens up towards the middle. There are not many arcs or strings of stars, however there is a clump on the E side, a few more on the NW side, and on the S is a string of 4-5 stars parallel to edge of cluster. There are 5 field stars surrounding cluster. Even though I spent 15 minutes putting dots on the paper, it is impossible to draw properly.

NGC 5286 (13h46.4 -51 22): I normally don't observe objects further south than -50 degrees, but I decided to do this globular cluster one night at Buckeye Hills. It is somewhat bright, pretty small, and next to a bright star. The faint halo brightens up to a smooth center, which contains an occasional brighter nucleus. The round globular was somewhat granular but no stars were resolved. It is brighter than many globulars higher up.

NGC 5367 (13h57.7 -39 58): This nebula was seen in the 10" scope as a smooth glow, somewhat faint, somewhat small, and surrounding a star. It disappeared with the UHC filter. There are stars to E and S that form a right triangle. My notes say "unable to confirm object on PAL plates", but looking at the Deep Sky Survey now, it seems to match up pretty good. I guess I need to observe it again and make sure.

(Ed. Note: Please note last month's installment of Fuzzy Spot was incorrectly identified as Crater. I hope we all realized Ken was talking about Ursa Major, The error was mine not his. Sorry for any confusion this may have caused.)

Fuzzy Spot Centaurus



STARS		SYMBOLS		
● <3	● >8	● Multiple star	⊠ Dark nebula	△ Radio source
● 4		○ Variable star	⊕ Globular cluster	× X-ray source
● 5		☄ Comet	⊙ Open cluster	○ Other object
● 6		☉ Galaxy	⊛ Planetary nebula	
● 7		□ Bright nebula	⊕ Quasar	

SAC 110 Best of the NGC: 5128, 5139
 Note: The heavy line near the bottom of the map is the apparent horizon. The irregular shaped red line is the actual horizon as seen from Flat Iron.

Seeing Double

By Thad Robosson

Sentinel turned out to be a wash on the 21st, but I was able to make up for it on the nights of the 22nd and 23rd by going out on the back porch and taking in some doubles in Ursa Major and Cancer. Here are some of the sights I took in....

April 22nd, ETX 90mm in use. 6 of 10 seeing and 4 of 10 transparency.

Struve 1544 (11h 31.3m, +59 42', 7.2/8.2, 12.4"/90*): 83x, barely yellow primary with a hint of blue comp. Easy to separate, and quite pleasing to the eye. Fairly equal, est. PA of 90*. Rated a 3 of 5.

Struve 1608 (12h 11.5m, +53 25', 8.0/8.2, 13.1"/221*): 83x. Primary is white with a slightly red companion. Very nearly equal- quite a nice pair est. Pa of 220*. Rated a 2.5 of 5.

Zeta Uma (Mizar) (13h 23.9m, +54 55.5', 2.2/3.95, 14.5"/153*): There is something inherently cool when you can split a pair of stars that both give off diffraction rings. A very lovely pairing; a white primary with a lavender-gray companion. Est. PA at 170*, rated this one a solid 2.

April 23rd, 8" f/6 in use seeing 6.5~7 of 10, and transparency is about 3 of 10

Iota Cnc (8h 46.7m, +28 45.7', 4/6.6, 30.4"/307*): 39x, as always, a very beholding sight. This is a great one to show non-astronomers to see their reaction and ask what colors they see. A beautiful yellow star with a royal purple companion. Very easy to separate, est. PA at 320*. Rated a 1.5 of 5.

Zeta Cnc (8h 12.3m, +17 38.6', 5.6/6.6, .8"/5.8"/337*/83*): Don't believe the numbers on this one! It's moving quite fast. The AB companions require good seeing and high power (over 400x for me). The AbxC companions are very easy and pleasing. The group appears pale yellow at lower powers, but the colors wash out at higher powers. I've been making sketches of this one since last year, and it was easy to see that the AB comp had moved since last year's observations. This is the one to watch over the next few years!! Rated a 1.5.

Struve 1186 (8h 08.9m, +27 28.6', 6.9/10.2, 3.2"/218*): A toughie!! Very unequal, and the 10th mag. companion didn't show up until 240x. Est. pa at 220*. No colors noted. Companion is right at limit of visibility tonight! Rated a 3 for the challenge.

Struve 1291 (8h 54.3m, +30 34.5', 6.1/6.4, 1.5"/312*): An absolute stunner!! A very tight, brighter set with just the thinnest line of black in between. Est. PA at 315*. Both are a brilliant white. Rated a 2.

In retrospect, both nights proved to be just what the doctor ordered, very peaceful and productive. What a joy it is to go out and mine some treasures from the sky all from the serenity of your own yard. Next time you'd like to head out to dark sky, but dread the lack of sleep, give some doubles a shot from your own yard. You'd be surprised at what's up there.

If you would like to submit any doubles observations, or discuss some of mine, please feel free to contact me at:
starstarcraaker@qwest.com

June 2001

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 June 2001

June 3rd	The 200 inch Hale Telescope at Palomar officially opens
June 6th	Moon is Full at 0139
June 8th	SAC General Meeting at Grand Canyon University 1930, Speaker: John Spencer (Lowell Observatory) "Latest Research on Jupiter's Moons"
June 8th	G.D. Cassini born in 1625. Discovered four Saturnian moons along with the division in the rings that bears his name.
June 13th	Mars at opposition, It will be mag -2.4 and be 20.56" in diameter
June 14th	Moon at 3rd Quarter at 0328
June 16th	SAC Star Party at Flat Iron, Sunset 1944, Ast twilight ends 2127, Moon Rise 0239
June 17th	Third Earl of Rosse born in Parsonstown Ireland in 1800
June 21st	Moon is new at 1158
June 26th	Charles Messier Born in 1730
June 28th	Moon at 1st Quarter at 0319

Future Planning

June 16-25	Grand Canyon Star Party, http://www.tucsonastronomy.org/gcsp.html
Sept 14th-15th	Northern Arizona Star Party. For more info see http://www.pacnet.org/nasp.htm

President's Message

By Jack Jones

Spring has sprung and the club has begun fulfillment of the "other" and very special part of our constitutional obligation, Public Service, with a triple-whammy. The Monday night after Easter we held a star party for the folks at the Lutheran Retreat Center in Carefree. Then, Wednesday April 26th we awarded our first scholarship to Gerry Lewis Jacobs at an Awards Ceremony at North High School, and Saturday night, April 28, we held our Spring Public Star Party at Thunderbird Park. I personally want to thank all those involved for their efforts!

I especially want to thank the Maddy family for their contribution to the star party at the Retreat Center. They made a good team with their two telescopes and were very instructive and informative in helping show the stars to a wonderful group of people in this beautiful setting. Initially wondering what I was getting into myself on the way there, I was soon delighted after meeting and talking to this group of attentive and curious new stargazers we had come across. Very refreshing after a steady stream of grade-schoolers, I must say! The Retreat is nestled behind Black Mountain, which effectively cuts off the glare from Phoenix and al-



lows viewing of 4th and 5th magnitude stars! It was a very rewarding experience and I wish more could have had the opportunity to participate. Let's do it again, definitely!

Our new Club scholarship for aspiring students in Astronomy, Aeronautics and Physics went to Gerry Jacobs, a student at North High, a beautiful school. I spoke to his class and hopefully gave a good accounting of the status of present day Astronomy and the career opportunities therein. Gerry is a very personable, intelligent, and conscientious student and we wish him luck in his pursuit of his Aeronautics Degree and his wish for a career as an Astronaut. At our May meeting we will present him with the "official" certificate and scholarship.

Lastly, I'm very glad to see the support we had for our Spring Public Star Party. We were able to muster 25+ scopes for the approximately 300 people who gathered, and managed to hand out over 100 information sheets and IDA pamphlets. Always rewarding and well worth the effort, your services to the public greatly increase your enjoyment of Astronomy and the sky. Thanks again, and thank yourself!

New Feature To Debut

With the advent of electronic distribution, I'll be adding a new feature starting next month. It will be called Profiles, and is basically nothing more than a brief bio of club members. I'm hoping to get some of our newer members featured in the next few months. The way it works is like so: I want a picture of the astronomer with his/her telescope, A few brief questions and Voila!, you're on the front page.

The color format of the new newsletter will help make this a very nice addition to SACnews. I must admit, this is not an original idea. I "borrowed" the idea from the Prescott Astronomy Club, who just recently started a similar feature.

I hope if I ask you to be "Profiled" you'll take the opportunity to let the rest of the membership get to know you a bit better.

Bits & Pieces

Minutes from the April 6th 2001 General Meeting

By Aaron McNeely

President Jack Jones opened the meeting at approximately 7:30 p.m. He asked for visitors to introduce themselves. There were ten visitors present. Aaron McNeely substituted as secretary for AJ Crayon. Diane Hope helped with various introductions due to Jack's impaired voice. Jack briefly summarized the results of this year's Messier Marathon. 25 observers found all 110 Messier objects. 20 observers found between 100 and 108. Awards will be presented during a future SAC meeting. Treasurer Peggy Kain provided the treasurer's report and stated that the total of checking and savings accounts for the Club was \$5416.17. She also had some telescope equipment for sale that had been donated to SAC.

Peggy also discussed the recently founded Scholarships and Grants program. The committee had met before the General Meeting and decided to award a grant of \$250 to one of Peggy's former students. This young man came from a disadvantaged background and made all of the "usual mistakes." He has become a responsible young man and has been admitted to the University of Arizona in their aerospace engineering program. An article about this young man will appear in a future issue of the newsletter.

ATM Subgroup director Thad Robosson suggested that a telephone network be setup to alert SAC members of rare, transient events such as aurora displays or supernovas. Contact Thad Robosson (see front of the newsletter) if you are interested in participating. Thad also reminded Club members of the ATM meetings held on the Tuesday of each month closest to the SAC General Meeting. Steve Coe discussed the next Novice Group Meeting scheduled for April 14th. It will be held at Flatiron and starts at 6:00 p.m. Steve also reminded everyone of the upcoming Sentinel-Schwarz Star Gaze scheduled for April 20-21. There will also be a public star party at Thunderbird Park on April 28.

Diane Hope presented the calendar of upcoming events. See elsewhere in this newsletter for more details. It was also announced that the East Valley Astronomy Club was sponsoring an Astronomy Day event at the Arizona Science Center on April 14. SAC members were invited to participate, despite the conflict with the Novice Group Meeting.

Nick Gilbert and Tom Polakis shared during the Show and Tell session. Nick was able to obtain images of the

Mir space station and the International Space Station using a camcorder coupled with the focuser of an 8-inch Dobsonian. As the space stations passed overhead, Nick followed each moving object by using the Telrad on his telescope. He then selected individual frames from his recordings to present during the meeting. The detail that Nick captured was extraordinary. All of the major components of each space station were visible when compared to photos obtained through the space agencies.

Tom Polakis also presented his aurora slides for Show and Tell. He had been alerted that an aurora display, rarely seen from Arizona, was taking place on the evening of March 30 and decided to drive to Four Peaks for a suitable observing site. The aurora covered almost half of the sky and presented a vivid red color in the slides. Tom also imaged a provocative saguaro.

Diane introduced the guest speaker, SAC member Chris Schur. Chris' presentation was named "Color CCD Astrophotography." Chris provided various reasons as to why CCD images are superior to film images. He also explained that his CCD camera is ideally suited for recording small objects with extreme clarity. The sky has thousands of small objects suitable for imaging. The color images were obtained by taking three separate exposures through red, green, and blue filters. The three exposures are combined using software to achieve a final image. Chris compared his recent images with his earlier results using film. It was instructive to note how the CCD images recorded faint structure that was often burnt out in regular film exposures. Images of galaxies were particularly striking, the individual H2 regions stood out as red areas in the spiral arms. Chris demonstrated that he is able, using a 12-inch Newtonian and a CCD camera, to obtain results similar to those obtained with the 200-inch Hale Telescope on Mt. Palomar. After the meeting, 21 SAC members went to JB's on 35th avenue and Northern and enjoyed food, refreshments, and plenty of astronomy discussion.

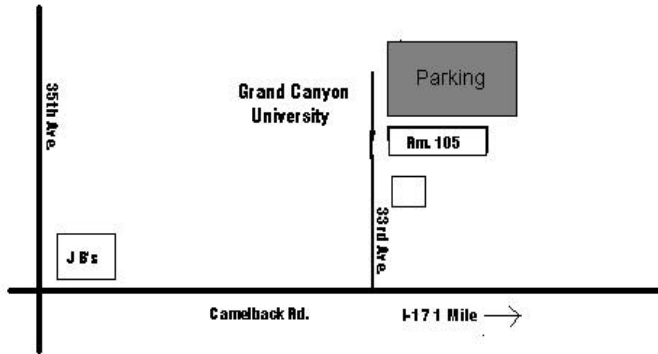
Michael Aaron McNeely Goodyear, Arizonamcneely@yahoo.com

(Ed Note: A.J. Crayon wishes to thank Aaron for compiling the minutes during his absence)

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.



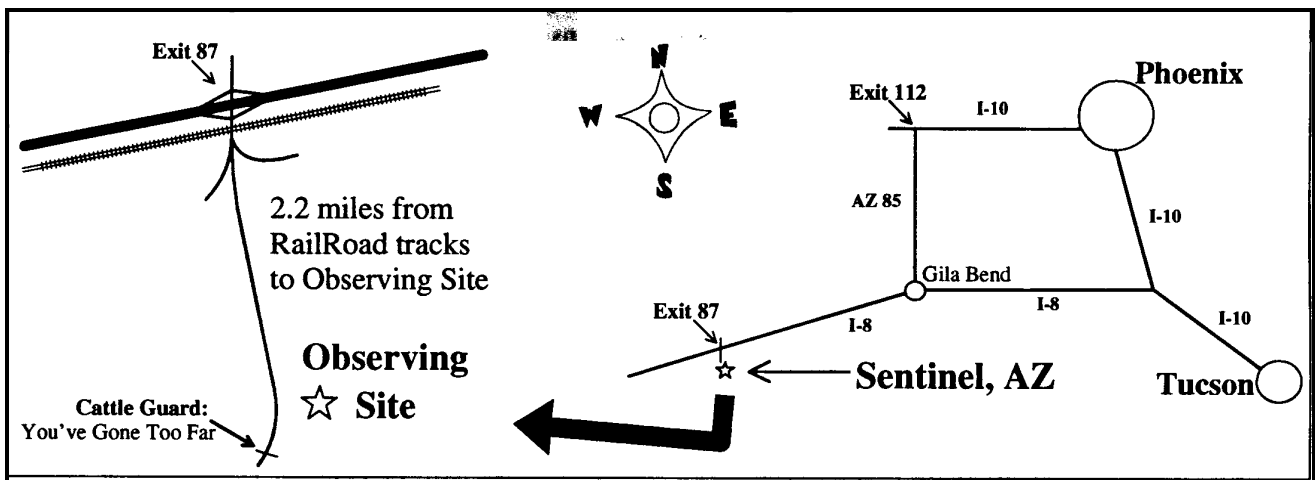
Flatiron Star Parties



Sentinel Schwaar Star Gaze

This years Sentinel Schwaar Star gaze will be held April 20-21 at the Sentinel observing sight. To get there take I-10 west to exit 112; SR 85. Take SR85 south 30 miles through Gila bend to I-8 westbound. Stay on I-8 for 29 miles to exit 87; Sentinel. There is a lighted tower at the exit. Turn left and go under the over pass and continue straight ahead. Cross the railroad tracks and take the dirt road 2.2 miles to the site (see map below).

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 12 you will go through Jack-rabbit wash and pass a cattle guard sign. There is a dirt road just after the sign, marked by white painted rocks. Turn on to this road and follow it about .9 miles. Just after you pass through a wash, you'll see the field on your left. If you hit the cattle guard, or the dirt road your on is next to a fence, you've missed the correct road. Go back and look for the white rocks. (see detail map above).



SAC Membership Services Membership

Memberships are for the following 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 (one newsletter)
\$100.00	Business Membership (includes advertising)
\$ 14.00	Newsletter only
\$ 6.00	Nametag for Members

Subscription Services

The following magazines are available to members. Subscribe or renew by paying the club treasurer. You will receive the discounted club rate only by allowing the club treasurer to renew your subscription.

\$ 30.00/yr	Sky & Telescope
\$ 29.00/yr	Astronomy

Please Print

Name: _____

Address: _____

Phone: _____

E-mail (newsletter will be sent to this address): _____

Make Checks Payable to SAC

Mail Completed form to:

Peggy Kain
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Astronomy Shoppe Closes By Rick Tejera

On Saturday, April 21st, The Astronomy Shoppe closed its doors. The closing sparked much debate on AZ-Observing regarding Phoenix's ability to support an astronomy store. As it turns out, Dick and the store were doing fine. Dick just decided it was time for him to pursue other things. The commitment it takes to run a business became more than he

was willing to handle, Something I think we can all understand. I was sorry to see the store go, as this is where I bought Gert, but I'm glad to know that Dick was able to leave on his own terms. I'll take the liberty on behalf of all SAC Members to thank him for his role in promoting astronomy, and to wish him the best of luck in his future endeavors.

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Videmus Stellae

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SAC Schedule of Events

SAC Meetings

January 12, 2001	July 6, 2001
Feb 9, 2001	August 3, 2001
March 9, 2001	September 28, 2001
April 6, 2001	October 26, 2001
May 4, 2001	November 30, 2001
Jun 8, 2001	December :TBA (Holiday Party)

Deep Sky Group Meetings

February 15, 2001	August 9, 2001
April 12, 2001	November 1, 2001
June 14, 2001	

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise
1/20	1751	1918	0525
2/17	1818	1941	0431
3/17	1841	2004	0258
4/14	1902	2029	0139
5/19	1928	2106	0410
6/16	1944	2127	0239
7/14	1943	2123	0109
8/11	1922	2053	2341
9/15	1837	2001	0513
10/13	1800	1933	0401
11/10	1731	1857	0254
12/8	1723	1852	0151