



Sacnews

Issue 278

May 2000

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Flat Iron Novice Session

Rick Tejera

A novice group session was held at the March 25th star party, which also officially christened the Flat Iron observing site.

I stopped at the Rip Griffin truck stop to meet my friends Greg & Laura Forman, who were driving in from California that afternoon. While there I literally bumped into AJ Crayon, who was there to convoy with any one who wasn't sure how to get to Flat Iron. Another one of my friends, Steve Perry, showed up with his son and Kathleen Hemplman, who was a guest at our last few meetings also arrived. We finally set off in convoy to the site, AJ on the point. The trip was quick and easy, for those who worry about directions rest assured this site is easy to find.

We arrived about 10 minutes before sunset and found all the usual suspects had already arrived, among them Steve Coe, our host for the novice session, El Presidente, Jack "Jefe" Jones, Ken Reeves, conspicuous by the absence of the 20", and Thad Robosson among those I know. By Steve's count there were 25 vehicles at the site and probably about 30-35 scopes. Seems like we had at least 40 people as quite few came in groups.

As the sun set, Steve gathered those there for the novice session around and gave a short talk on the different types of telescopes available, their advantages and disadvantages and so forth. His

(Continued on page 3)



Steve Coe instructs novices about the basics of telescope design during twilight at Flat Iron. (photo by Rick Tejera)

*For those who have telescopes or software that need Coordinates, Flat Iron is located at:
N33d 39m 57s,
W112d 49m 11s.*

Bits & Pieces

Jennifer Keller, Sac Secretary

MINUTES FROM THE MARCH 17, 2000 MEETING & BOARD MEETING

A Board Meeting preceded our regular club meeting at 6:30. Please remember all members are invited to attend the board meetings--your input is necessary and valued. At the Board Meeting we officially changed our third quarter moon Star Party Site to the new Flat Iron Site--next being April 22. Our May meeting will be held at the Science Center's Planetarium--the speaker is Jeff Hester. If you have slides for show & tell bring them--they will look very cool projected on the Planetarium dome. The June Meeting will be a SWAP Meet and Show and Tell--dust off any astronomy stuff you're not using and make a buck. --Which by the way this newsletter is available for advertising astronomy stuff you want to sell anytime. The Club is purchasing a computer to run our Web sites through. We have also agreed to sponsor a luncheon for the participants at the Grand Canyon Star Party on June 4th. Telrad Tejera is working on a new-members packet. The best news is we renamed our Sentinel Star Gaze the Pierre Schwaar Memorial Sentinel Star Gaze or as Thad Robosson suggests: The Sentinel Schwaar Gaze--the next is April 29th.

Our regular meeting commenced at 7:30 with 61 in attendance. We welcomed Five guests, including Bob & Pat Bailey's granddaughter, Peggy. Our May Speaker will be David Bernstein re: Galaxy Groups. Peggy Kain gave us the Treasurer's report. AJ Crayon taught us a little history on The Messier Marathon, and gave out the checklist for April 1st All Arizona Messier Marathon. Jack Jones and Rick Rotrammel showed slides of Pierre Scopes, Pierre & Pierre's Binocular Chair. Thank you. We all miss you Pierre.

We still have a few 2000 Observer Handbooks available for \$13.00; contact Treasurer Peggy Kain to get your copy now. Adam Sunshine has graciously taken the Properties Director job. Thanks for your kind understanding and thoughtfulness in doing this. Steve Coe volunteered a dozen members to review and proof a disk on his NGC project then introduced our speaker, Wil Milan.

Wil gave us an informative history on Astrophotography from 1959 through present CCD imaging. Great presentation, thanks Wil.

The meeting adjourned at 9:40 with 22 meeting at JB's for further discussion.

Don Maacholz to Retire

Rick Tejera, editor

Don Maacholz, author of "Comet Comments" announced that the next column would be his last. Don cited the rigors of producing a monthly column and the ready availability of the information he present on the internet as the main reasons. Don wanted to thank his readers for their support. I want to thank Don for his efforts in promoting the study of comets, not to mention filling a page of space each

month!! Best of luck to Don in the future.

With that said, it is time to introduce our new column, Seeing Double, which will preview in this issue. Authored by our own Thad Robosson, Seeing Double will present topics of interest regarding the observation of double stars. I'm looking forward to it and hope you'll enjoy it.

(Continued from page 1)

plan was to have several members with different types of scopes all point at the same object and let everyone compare the view and ask questions. My friends each brought telescopes to the sight; Greg and Laura had a new ETX90EC with autostar that was to see first light. Steve had a 4.5-inch newt he got for \$45.00 at a garage sale. Kinda ran the full spectrum there. I helped Steve align his scope (did a pretty good job too, for a Dob driver, if I may say) and then helped Greg & Laura get the ETX up and running. A few misunderstandings of the directions and we finally had it aligned in the alt-az mode which worked fine. The scope sat on the card table I use when observing which served well at low power but wasn't sturdy enough for any high power observing. The auto star worked great bringing nine out of ten objects into the field and the tenth in the finder, although it did think Jupiter was below the horizon.

As the sky darkened, I noticed that this site will serve well into the future the horizon is good in all directions and Aurora Phoenicia, while there, doesn't seem quite as obtrusive as from

Buckeye Hills. There were quite a few orange flashes to south which were probably fighters practicing at the Goldwater range. Ken mentioned it was probably not a good night to be at Sentinel! I spent most of my night help my friends, bouncing back and forth between the ETX and Steve's Garage sale special, which by the way had some pretty good images for \$45.00.

My friends left about 2200 or so and then it was me and Gert (my scopes name, don't ask). I got a few more Messiers and mingled a bit all too soon it was the moon was getting ready to rise so we all packed up except for one lone wolf, who's name I forget, who had a few more things he wanted to get. As we drove home, AJ & I talked on the CB about astronomy and life while a buttery yellow quarter moon rose in the east, guiding us home. Events such as this remind me why I love astronomy. To be able to share the night sky with some really nice people is something I really look forward to each month. To be able to help folks with a similar interest is just icing on the cake.



*Steve Coe Poses with the participants in the March 25th Novice Group Session at Flat Iron .
(Rick Tejera photo)*

Fuzzy Spot, Ursa Major

By Ken Reeves

Ursa Major is best known to most people as the Big Dipper, but this asterism is only a small portion of the figure which forms a bear. The handle part of the dipper is the tail and the scoop forms the body with other stars in the area forming the head and legs. Using a little imagination, the figure of an animal can be made out.

Ursa Major is an extremely large constellation extending well beyond the Big Dipper. Only Hydra and Virgo are larger in area. Also being on the northern end of the Virgo Cluster of galaxies, it is very rich in deep sky objects. There are 7 Messier objects, 10 Best of the NGC objects, and a whopping 46 Herschel 400 objects. It is obviously impossible to cover all of these objects in the space allowed for this article, so this month I'm focusing on the Messier objects. All of these observations were made in the 10" scope.

M-40 (12h21.9 +58 06): is also known as Winnecke-4, and is probably the most bizarre of the Messier Objects. It is a double star near the point where the handle attaches to the bowl of the dipper. I saw the pair as a wide double colored white and slightly red, and oriented E/W. Hevelius thought he saw a nebulous glow around the stars and because of this, Messier included this object in his catalog even though he did not see any nebulosity. To the W is galaxy NGC 4290 which is worth a peak while you are in the area.

M-81 (09h55.6 +69 04): is a nice almost face on spiral galaxy, and at low power can be viewed with M-82 in the same field. It is very large, very bright, and contains a much brighter middle, which suddenly brightens to a non-stellar nucleus. It is elongated NW/SE, and by using averted vision, the halo extend quite a bit, especially in the minor axis. 2 stars are involved to the SE. There is some possible mottling suspected, but for the most part it is very even.

M-82 (09h55.8 +69 41): is a nice contrasting object to nearby M-81. At 70X I saw it as pretty bright, fairly large, extremely elongated ENE/WSW, very mottled, and with no central brightening. There are possible dark notches at the middle of the galaxy. Taking a little more time, I observed a fainter halo surrounding the main central streak. There is a nice string of 3 stars leading away from the galaxy to the SW and several other stars close by. This is a very nice streak of light in the sky.

M-97 (11h14.8 +55 01): better known as the Owl Nebula, is a planetary nebula out of place in the middle of galaxy country. I noted it as very round, with the dark spots suspected and a bright star to N. Using the UHC

filter, the nebula is more obvious and the dark eyes are easier to see.

M-101 (14h03.3 +54 22): is an absolutely fantastic face on spiral galaxy. There are numerous knots of nebulosity which are part of M-101, and other galaxies in the area which are all real nice. At 70X I considered this galaxy as very very large, pretty bright, with a fairly bright halo and a nice sharp center. A definite clockwise spiral structure is seen, as well as some knots of nebulosity noted with averted vision. At 100X there is a bright non-stellar nucleus, 2 knots to SW, and one to SE.

M-108 (11h11.5 +55 40): is near the Owl Nebula. It is very bright, pretty large, very elongated WNW/ESE, and contains a very bright middle with a stellar nucleus. There is a star on W side of the halo. Using averted vision makes the galaxy stand out somewhat. This is one of the dimmer Messier Objects.

M-109 (11h57.6 +53 22): the final Messier object in Ursa Major, is somewhat bright, elongated E/W, contains a bright middle with a star involved near center, and a non-stellar nucleus. Using averted vision makes halo grow a little. An interesting note that I made is that the "halo extends between the ends", whatever that is supposed to mean.

Herschel 400 Objects

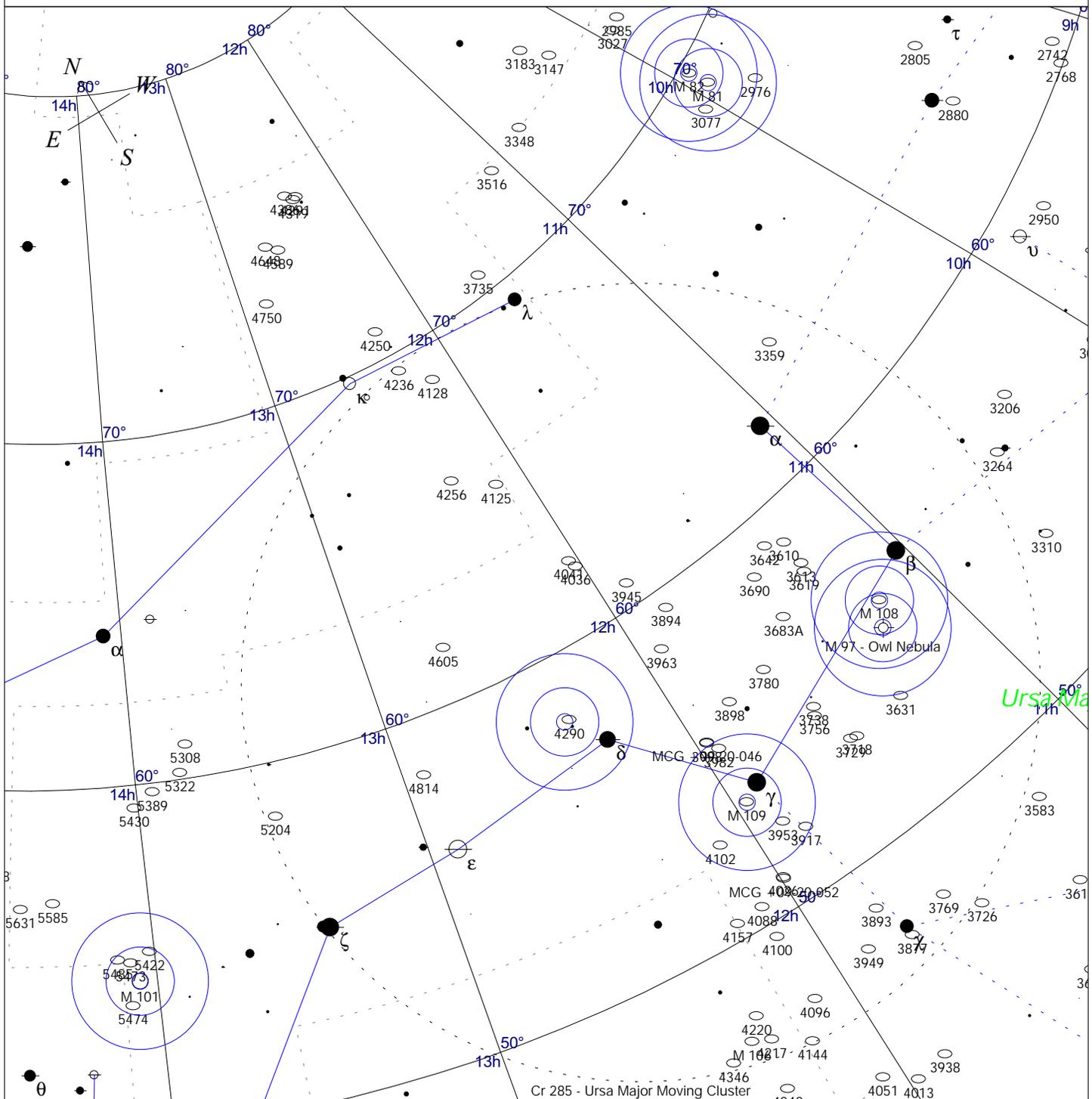
2681, 2742, 2768, 2787, 2841, 2950, 2976, 2985, 3034, 3077, 3079, 3184, 3198, 3310, 3556, 3610, 3613, 3619, 3631, 3665, 3675, 3726, 3729, 3813, 3877, 3893, 3898, 3941, 3945, 3949, 3953, 3982, 3992, 3998, 4026, 4036, 4041, 4051, 4085, 4088, 4102, 5322, 5473, 5474, 5631

SAC's 110 Best of the NGC Objects

2841, 3077, 3079, 3184, 3675, 3877, 3941, 4026, 4088, 4605

(Ed Note: Ken is right when he says Ursa Major is rich in galaxies. The objects in the list of Herschel 400 and SAC's 110 best of the NGC are underscored if they are visible on the Fuzzy Spot map on the following page. I've only highlighted the Messier objects with the usual Telrad circles. Happy hunting!)

Fuzzy Spot Ursa Major



STARS		SYMBOLS	
● <3	● 5.5	● Multiple star	⊖ Dark nebula
● 3.5	● >6	○ Variable star	⊕ Globular cluster
● 4		☄ Comet	⊕ Open cluster
● 4.5		○ Galaxy	○ Planetary nebula
● 5		□ Bright nebula	⊙ Quasar
			△ Radio source
			× X-ray source
			○ Other object

Objects that are underscored in the list of Herschel 400 and SAC's 110 Best of the NGC are visible on this map.

Local Time: 09:19:43 9-Apr-2000

UTC: 16:19:43 9-Apr-2000

Sidereal Time: 22:01:17

Location: 33° 39' 56" N 112° 49' 10" WRA: 12h06m15s Dec: +62° 39' Field: 32.0°

Julian Day: 2451644.1804

Presidents Message

By Jack Jones, SAC President

Hello Everyone!

One of the things we resolved to do at our Board Meeting in March is to get communications going, both inside and outside the Club. This involves the revamping of our web site, publication of our new dark-sky sites in our newsletters, the creation of Club Information Sheets to distribute at Astronomy shops, and new member packets for new members. Let us not drop the ball on this endeavor now that we have made the investment and done the work to identify what is needed!

Along with this is everyone in the Club's on-going endeavor to "seek out new life-forms and go where no one has gone before" so to speak, in greeting and speaking to those who may be new to the Club, answering their questions, acquainting them with the structure of the Club, and making them feel at home and want to come back again. Remember how you were when you first came to an "Astronomy Meeting"? Wouldn't you want some one new to have an even better initial experience than you did?

Remember, remember, remember! May 19th our SAC Meeting will be at Arizona Science



Center in the Planetarium at 7:30 PM. It is one of the biggest planetariums in the country with a sixty-foot dome and a state of the art Digistar projector. Our speaker will be ASU astronomer Jeff Hester of Eagle Nebula Star-Egg Photo fame! We will be able to put their state-of-the-art projector through its paces and have a live demonstration, as well as have our scheduled speaker talk and our show-and-tell on the dome! Check www.azscience.org for parking and other details.

I hope you are making your reservations at the Grand Canyon for the June 3 thru June 10 period, be it hotel, motel, or campsite. In addition to saving the \$20.00 entrance fee if you bring your telescope, you will also get a free luncheon Sunday the 4th at the Canyon, courtesy of the Club. Be sure you visit www.tucsonastronomy.org to find out the details and the earliest you can reserve a campsite.

Again, make sure we have your inputs on all these goings-on so we can make these things how, why, when, and what YOU want them to be!

Jack Jones

First Light-Welcome New Members

The following people joined our ranks this year. Please join with me in extending them a warm, if not belated welcome to SAC. Let them know you're here to help them get the most out of amateur astronomy:

Spencer Covington
Angelo Del Pariigi
Bob Harper

Russell Corfman
J.D. Maddy
Bill MacMillan
Steve Smith
Owen Coffman
Bruce Wyman
Harry Scholz



May 2000

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 May 2000

- May 4th** Eta Aquarid Meteor shower peaks, New moon 0912 mst
- May 7th** Jupiter In conjunction with the Sun, 2100 mst
- May 8th** Mercury at Superior Conjunction, 2100 mst
- May 10th** Saturn in Conjunction with the Sun, 1300 mst. First Quarter moon 1300 mst
- May 14h** **SAC General Meeting 1930 Arizona Science Center, 123 E Adams St, Phoenix.
Speaker: Jeff Hester**
- May 18th** Full Moon, 1234 mst
- May 19th** **SAC General Meeting. 1930 at Grand Canyon University. Guest speaker : Wil Milan:
Astrophotography, The State of the Art and Beyond.**
- May 19th** Full Moon at 2144 mst
- May 26th-29th** Riverside Telescope Makers Conference, Camp Oakes, Big Bear California, For info call (909) 948-2205 or visit <http://www.rtmc-inc.org>
- May 26th** Third Quarter moon, 0455 mst
- May 27th** **SAC Star Party : Flat Iron Mountain Site (see directions page 9)**

Memories of Pierre

I first met Pierre Schwaar at a public star party five years ago. I saw a beat up old van, and instead of coming upon the usual group of 4 or 5 people gathered around a telescope, I saw a group of 4 or 5 telescopes gathered around a person. Each telescope was pointed

at a different object in the sky, and Pierre could tell you all about any one of them up there. He was a great astronomy educator. When I got my telescope that he built for me, the experience of using it reminded me of this poem by Pablo Neruda:

And suddenly I saw
the heavens
unfastened
and open,
planets,
palpitating planations,
shadow perforated,
riddled
with arrows, fire and flowers,
the winding night, the universe.
And I, infinitesimal being,
drunk with the great starry
void,
likeness, image of
mystery,
I felt myself a pure part
of the abyss,
I wheeled with the stars,
my heart broke free on the open sky.

With Pierre gone, we have lost some of the magic. What we must do is try to get some of the magic back.

Jack Jones

Hello to the friends and family of Pierre. I can't be with you today, but I'd like to share my favorite memory of Pierre with you.

Pierre and I were guests of Hawaiian telescope maker Barry Peckham in May of 1998. I brought my 12.5 inch Pierre Schwaar mirror and travel scope to Hawaii. The first night out Pierre, Barry and I went to the North Shore of the island of Oahu. That's where the surfers go. We didn't bring surfboards. We were star surfers that night. Pierre wanted to do a star test of several of his mirrors. We started with my telescope. I had already put an eyepiece in the focuser. Pierre took a look through the eyepiece and groaned. "How can this be?" "This mirror is

terrible!" "My mirror is stressed", he shuddered. We took the eyepiece out, and Pierre re-collimated the telescope using nothing but his eyeballs and the image of a star straight through the focuser - the preferred Pierre way. Back in went the eyepiece. The star image was still terrible!

Pierre then took the secondary mirror apart, remounted it, and again we put the eyepiece in the telescope. The star Sirius still looked like a white hairy spider.

We were at our wits end. Pierre was devastated. Then I took the eyepiece out and to my embarrassment dis-

(Continued on page 9)

(Continued from page 8)

covered that the clear eyepiece cap was still on the eyepiece! We all sighed in relief, and proceeded to have a wonderful two weeks of observing On Oahu and Molokai'i. Each observing session thereafter, Pierre always made sure I had removed the eyepiece cap.

My family has five of Pierre's little six inch companion telescopes, and we all feel that we have lost our special companion today. Thanks you to the Schwaar family

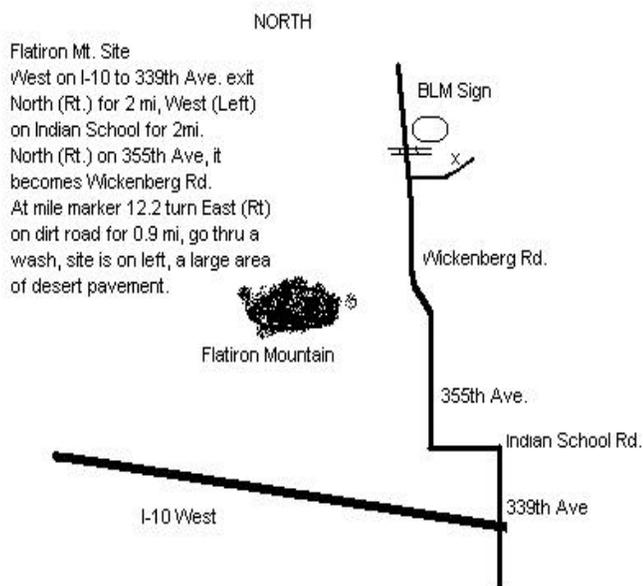
for sharing Pierre with us for a little while. He was a very special man and a very special friend. Knowing him has enriched all of our lives.

Jane Houston
San Francisco Sidewalk Astronomers

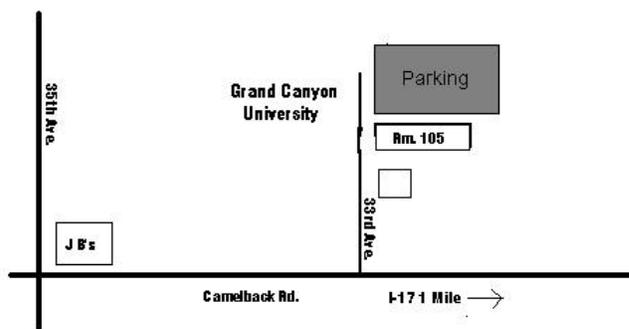
Ed Note: AJ Crayon read this memory of Pierre at the memorial.

Directions to SAC Events

Flat Iron Mountain Observing Site



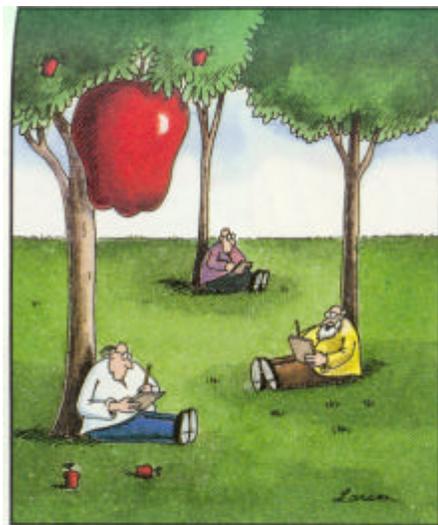
General Meetings



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.



Two of my favorite cartoons from "The Far Side" by Gary Larson. Reprinted from the "Countdown to the Millenium Calendar.



"Nothing yet. ... How about you, Newton!"

Seeing Double

By Thad Robboson

Hello, and welcome to the first installment of "Seeing Double". To state the obvious, I'll be writing on double stars. Not just which ones are up in the sky, but on various topics about doubles and their observation. Now, to be sure, many astronomers are a bit hazy about the appeal of looking at 2 tiny points of light through the eyepiece. After all, how interesting could those 2 points of light be compared to a bright Messier object or viewing Jupiter on a perfectly still night? Well, this first column is where I'll try to bring a few converts into the fold of double star observers.

Here are a few reasons to give doubles a serious try...

The Challenge...

Quite a few doubles are very close. Just as you need to concentrate on a planet to get that split second of steady seeing, doubles can require your undivided attention, and many varied attempts, to split. Couple that with the limitations of your equipment, your eye, and the prevailing conditions, it's likely that splitting some doubles will prove to be an obsession. (Anyone split Sirius lately?)

Building skills...

About 2/3 the way through the SAC 110 Best Doubles list, I realized that finding objects were not as dreadful as when I first started. My star hopping skills had gained strength! A good chunk of the SAC Doubles list is faint stars that wouldn't normally grab your attention. It's not the same as knowing that you'll see a glob of stars or mildly faint smudge when you've found your target; you need to have the view through the eyepiece and your atlas in sync or you'll blow right over them.

Building skills, part 2...

Once I had done some of the list, I finally had some idea of the technical side of observational astronomy. I learned just what 5 arc seconds looked like, and what it meant when the comes was at PA 305. This on top of my newly developed skills in using my 'scope and making observations. I admit, I'm still quite green next to some of the club members, but now I have a good grasp on the basic skills, am excited about using them in future programs.

Doubles are City Slickers...

It is entirely possible to view every double on the SAC Doubles list (and many others) from downtown Phoenix. The only reason I did some in dark sky was because the ease afforded to me in star hopping. Oddly enough, the one with the most Southerly declination was observed from my backyard, just 2 finger widths above my roofline. And the sky doesn't need to be sparkling clear either; you can hit nearly all the SAC 110 doubles in fairly hazy skies. Try that with the 110 best NGC list.

In due time...

It is believed that nearly half of all stars are doubles, with only a small handful exhibiting motion that humans have studied. In the grand scheme of the universe where lifetimes are measured in millions and billions of years, doubles can be the stellar doppelganger of Speedy Gonzales. Zeta Cnc is such a star. Its 2 companions are due to form a line with their keeper in 2002. Not that we'll be able to see it, the closest companion will speed by that imaginary line in the short time it takes for Cancer to disappear into the sunset and rise again in the morning hours.

De Colores...

Admittedly, a lot of the notes I took mention "no color noted". But, there are a few doubles that I keep pointing the scope at when they are out. Doubles provide the most color available to an astronomy buff. I've seen deep red, brilliant orange, glaring yellow, neon blue, royal purple, and many combinations of these. If you've never seen Alberio, Iota Cnc, or Xi Bootes, you really have missed a lot.

Well, I hope that my sales pitch has convinced some of you to give doubles a try. If anyone would like to chat about doubles, techniques, experiences, or this column, my E mail address is... tmrob@primenet.com. Thanks for reading.

SAC Membership Services Membership

Memberships are for the following calendar year and are pro-rated 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
- \$ 4.00 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: _____

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E-mail: _____

Make Checks Payable to SAC

Mail Completed form to:

Peggy Kain
SAC Treasurer
4030 E Windrose Dr
Phoenix AZ 85032-7435

Deadlines for SACnews

For those of you who contribute to SACnews or plan to contribute, here are the deadlines for upcoming issues. Items received after these dates cannot may be held until the next issue pending space availability. Also please remember, If you have something you want to sell, submit an ad for Such-A-Deal.

June 2000	May 12, 2000
July 2000	June 9, 2000
August 2000	July 7, 2000
September 2000	August 8, 2000
October 2000	October 6, 2000
November 2000	November 3, 2000
December, 2000	December 2, 2000

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Videmus Stellae

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SAC Schedule of Events

SAC Meetings

January 21, 2000	July 14, 2000
Feb 18, 2000	August 11, 2000
March 17, 2000	September 15, 2000
April 14, 2000	October 13, 2000
May 19, 2000	November 10, 2000
Jun 16, 2000	December 9, 2000 (Holiday Party)

Deep Sky Group Meetings

February 24, 2000	August 17, 2000
April 20, 2000	October 19, 2000
June 22, 2000	December 14, 2000

SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise
1/29	1759	1924	0245
2/26	1824	1947	0131
3/25	1846	2010	2320
4/22	1907	2036	2350
5/27	1932	2111	0224
6/24	1944	2126	0056
7/22	1937	2114	2329
8/19	1911	2040	2204
9/23	1825	1948	0244
10/21	1750	1912	0141
11/18	1727	1853	0039
12/16	1725	1854	2336