

Saguaro Astronomy Club

Metro Phoenix, Arizona

SACNEWS



April 1998 — Issue #255

v3.23

Deep-Sky Objects from the Eclipse Cruise by Steve Coe

All the follow objects were observed from the deck of the S.S. Dawn Princess while cruising in the Caribbean Sea. I used a variety of sizes of binoculars. In general the seeing was 5/10, not too twinkly, but not excellent, and the transparency was 4/10, lots of humidity in the that part of the world. The Saguaro Astronomy Club members found a location on the ship that was forward of the bridge, it was kept dark so that the bridge crew could see forward of the ship while steaming to the next day's port of call. Certainly a unique viewing experience to be observing from a gently rolling deck while a 20 knot "breeze" is blowing. A moment's thoughtlessness and your star chart would be suddenly 200 yards astern. But I have not had too many chances to observe the southern skies, so I did the best I could with this opportunity. It is also unusual to be able to observe for several hours and make your way down a passageway to a place where a gourmet meal is being served. It is unique to take a break from observing and be served Beef Wellington and Cherries Jubilee. All in all the eclipse cruise of Feb. '98 was a joyous vacation.

The Southern Milky Way is easily seen as a sweeping glow that starts in Gemini, then through Orion, Canis Major, Puppis, weakens in Vela, then bright and wide again in Carina and Crux. Some dark lane structure can be glimpsed, it is not obvious.

The Large Magellanic Cloud is somewhat difficult with just the naked eye from this latitude. First, it is not above the horizon much. Second, the humidity and clouds near the horizon lower the contrast and make it difficult. In the 10X50 binocs I could just see the Tarantula Nebula and a faint glow of the main body of the galaxy. It was much better in the 16X80s, the Tarantula is much easier and the contrast between the galaxy and the sky is better. Never a good view, but it was there.

The False Cross is an asterism of stars at the Vela-

Quick Calendar

SAC Board Meeting

Ken Reeves' House

7:30 PM, Friday, April 3

SAC Meeting

Speaker: Paul Comba: *Discovering Asteroids*

7:30 PM, Friday, April 10

SAC Star Party

Buckeye Hills Recreation Area

Novice Group Session at 6:30

Saturday, April 18

Sentinel Star Gaze

Sentinel, AZ

Saturday, April 25

Carina border that mimics the "Real" cross — Crux. The four stars of the False Cross form a somewhat larger cross than Crux, but they do "tilt" at the same angle. Essentially, the False Cross and Crux are on either side, east and west, of the Eta Carina Nebula.

IC 2391 is on the west side of the False Cross. Naked eye visible as a dim patch with two stars involved. With the 10X50 binoculars there are 8 stars of mags 6..9 in a loose grouping that reminds me of M38 somewhat.

NGC 2516 is below the False Cross. It is easily resolved in the binoculars, I could see 10 stars and a background of unresolved members. It is somewhat triangular in shape, brighter in the middle and compact. Beautiful line of bright stars are to the north and west of this cluster. It is easily naked eye.

Crux is an obvious naked eye constellation. The "top" star is Gamma Crux and is seen as orange, even with no optical aid. Comparing to Betelgeuse, it is about the same tint. The other star with color in the area of Crux is Epsilon, also known as Mariposa, Spanish for butterfly. Because this star is dimmer than Gamma, I seen it as faintly orange in the binocs, but not brilliantly colored. Crux is always smaller than I have in my minds eye.

Eta Carina is unmistakably naked eye, a bright, elongated glow in the Milky Way. Using the 10X50 binocs it is a large and bright nebulosity that is cut into two almost equal parts by a V-shaped dark lane. There are 12

Adapted from the June 1982 SACNEWS

DIM MOMENTS IN AMATEUR ASTRONOMY

by Paul Dickson

DEFINITIONS THE EARTH

THE DOBSONIAN'S CLOCK DRIVE

stars involved within the nebula. With averted vision the outer, dimmer portions of this huge nebula are seen. All together this nebulous complex is about 2 degrees in size. Using a friend's 16X80 binoculars for a peek, I counted 16 stars involved and the glow of the nebula is easily half of the field of view, I estimate 2 degrees in size. The star Eta Carina is yellow-orange in color, using the big binoculars.

IC 2602 is the southernmost of the three bright clusters that surround Eta Carina. There are 12 stars resolved in two groups. This cluster has a wide dark lane down the middle. It is a sparse cluster, but the stars involved are bright, I estimate 7th to 9th magnitude. I believe that it is only because of its low altitude that I cannot see it naked eye.

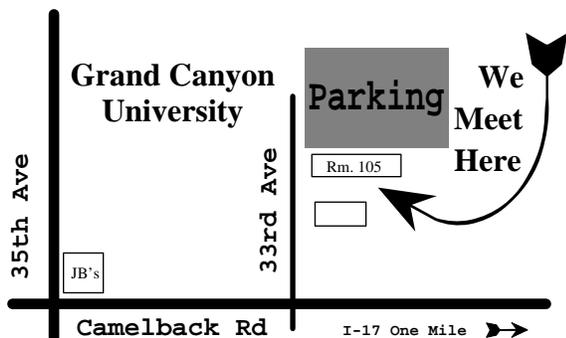
NGC 3593 is above and to the "right" of Eta Carina. It is very compact, but bright enough to be easily seen in the 10x50 binoculars. No stars are resolved.

NGC 3532 is a splendid cluster, I can resolve 32 stars across the bright face of this large, dense open cluster. It shows a high surface brightness and I can easily see it naked eye. A hint of the dark lane that cuts into this group can be seen on the north side of the cluster. Also, with the wide angle view, I can see that NGC 3532 is in a very dense region of the Milky Way. It is surrounded by a myriad of stars on all sides, many in beautiful curving chains. Using 16X80 binocs, I could resolve 36 stars and the dark lane within this cluster was much easier. Very much reminds me of M11 and the Scutum Star Cloud.

NGC 3766 is between Eta Carina and Crux. It is obvious in the 10X50s and has a high surface brightness. Only 3 stars can be resolved with the binocs, but there are many other bright stars just to the north of this compact cluster. The 16X80 binoculars resolved 8 members and really frame up the cluster with the bright stars to the

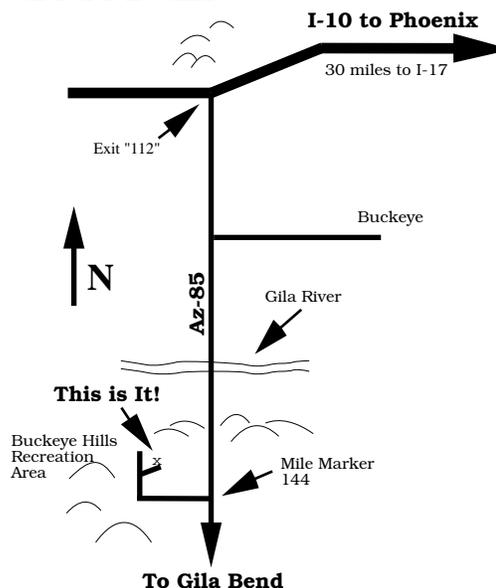
Directions to SAC Events

SAC General Meetings 7:30 PM at Grand Canyon University, Fleming Building, Room 105 — 1 mile west of Interstate 17 on Camelback Rd., north on 33rd Ave., second building on the right.



SAC Deep Sky Subgroup Meeting at John & Tom McGrath's, 11239 N. 75th St., Scottsdale, 998-4661 — Scottsdale Rd. north, Cholla St. east to 75th St., southeast corner.

SAC Star Parties at Buckeye Hills Recreation Area Interstate 10 west to Exit 112 (30 miles west of Interstate 17), then south for 10.5 miles, right at entrance to recreation area, one-half mile, on the right. No water and only pit toilets. Please arrive before sunset; allow one hour from central Phoenix.



north.

NGC 4755 is the Jewel Box. It can just be seen naked eye, and 6 stars are resolved in the 10X50s. The stars are a little different in tint, but not much in the binoculars.

The Coal Sack is discernible, but not easy. There is a missing portion of the glow of the Milky Way in this region.

Alpha and Beta Centauri follow Crux over the horizon. They are bright enough to be easy, even when only a few degrees above the horizon. In the binoculars, they are twinkling nicely and in a rich field of view. The stars of Centaurus and Lupus are "above" Alpha and Beta. I cannot make a centaur out of them, but there is a 10 degree square field with over 30 bright stars, a nice naked eye view.

NGC 3114 is very nice in the big binoculars, I counted 28 stars resolved. Several nice bright stars are lined up in curving chains that look to me like the fingers of a hand or remind me of a spiral galaxy. There is a faint haze of unresolved background stars.

NGC 3201 is an obvious globular cluster in the 10X50s, never resolved into stars, but a very bright core and much larger than the star images.

Bits and Pieces

Minutes from the March Meeting

President Paul Dickson opened the March meeting amidst much discussion of the eclipse. He invited any guests to sign the guest book and to introduce themselves. 14 people introduced themselves (including a Bill Gates).

Jack Jones gave the treasure report. We are currently at 97 members.

A.J. Crayon talked about the upcoming deep sky meeting on March 19th at the McGrath's house. He then talked about the Messier Marathon this year on March 28th, indicating that it should provide a good opportunity to see all 110 objects. He presented an award to Chuck Hilliker for observing the 110 double star list, good work Chuck. Finally, he brought up the 'blue shirts', selling them for \$12 each.

Rich Walker gave a Public Events announcement. On April 1st is a school event at Challenger school, On April 2nd at Rich Walker's school, and finally on May 2nd is a public star party at Estrella Park. It was announced that Wil Milan volunteered to help Rich with the public events, thanks Wil.

Paul Dickson mentioned the SAC web page on Access Arizona (www.accessarizona.com). He is asking for images of SAC events to include on the page. He also announced his books for sale, *SAC 110 Best of the NGC*, *The Messier Logbook*, and *Finding the Herschel 400*.

Comet Comments by Don Machholz

(530) 346-8963 CC236.TXT March 7, 1998
<http://members.aol.com/cometcom/index.html>
DonM353259@aol.com

1995 O1 (Hale-Bopp)					
Date	RA-2000-Dec	Elong	Sky	Mag	
03-28	04h59.9m -53°43'	80°	E	9.3	
04-02	05h02.4m -53°06'	79°	E	9.3	
04-07	05h05.3m -52°32'	78°	E	9.4	
04-12	05h08.5m -52°01'	78°	E	9.5	
04-17	05h11.9m -51°33'	77°	E	9.5	
04-22	05h15.7m -51°07'	76°	E	9.6	
04-27	05h19.6m -50°45'	76°	E	9.7	
05-02	05h23.8m -50°26'	75°	E	9.7	
05-07	05h28.1m -50°10'	75°	E	9.8	
05-12	05h32.6m -49°57'	75°	E	9.9	

Comet Hale-Bopp slowly dims deep in the southern sky. It is still displaying a short tail. Meanwhile **Comet Meunier-Dupouy** continues its travels in the morning sky. Both comets are about three Astronomical Units away.

COMET HUNTING NOTES: Of the 100 comets visually discovered since 1975, only one was found without the use of a reflector, refractor or binoculars. It was Mer-

lin Kohler's comet discovery on Sept. 3, 1977. He used an 8" Dynascope Schmidt Cassegrain. This discovery took about forty hours of sweeping. Mr. Kohler is now retired and still living in Quincy, California.

C/1997 J2 (Meunier-Dupouy)				
Date	RA-2000-Dec	Elong	Sky	Mag
03-28	21h48.0m +31°44'	47°	M	11.7
04-02	21h53.6m +31°35'	48°	M	11.7
04-07	21h58.8m +31°27'	50°	M	11.7
04-12	22h03.6m +31°20'	51°	M	11.6
04-17	22h08.2m +31°13'	53°	M	11.6
04-22	22h12.3m +31°07'	55°	M	11.6
04-27	22h16.1m +31°01'	58°	M	11.6
05-02	22h19.5m +30°55'	60°	M	11.6
05-07	22h22.5m +30°49'	63°	M	11.6
05-12	22h25.1m +30°41'	66°	M	11.6

Orbital Elements

Object:	Hale-Bopp	Meunier-Dupouy
Peri Date:	1997 04 01.1370	1998 03 10.4365
Peri Dist:	0.914008 AU	3.051015 AU
Arg/Peri (2000)	130.5787°	122.6755°
Asc Node (2000)	282.4653°	148.8429°
Incl (2000):	089.4268°	091.2731°
Eccentricity:	0.995085	1.000760
Orbital Period:	~2500 years	Long Period
Reference:	MPC 30738	MPC 30738
Epoch:	1997 12 18	1998 03 08
Absol Mag/"n":	-1.0/4.0	4.0/4.0

The 1998 Sentinel Star Gaze

April 25, 1998

This is the seventh annual Sentinel Star Gaze, sponsored by SAC's Deep Sky Group. Sentinel is a remote site situated between Gila Bend and Yuma (about 100 miles southwest of Phoenix) making for a very dark sky. On the day of the event sunset is just after 7 PM, with twilight ending at 8:15. Those staying the entire night can expect twilight to start at 4:30 AM and sunrise at 5:45 AM. For those of you with computers, the Sentinel site is at $32^{\circ} 49.7'$ North by $113^{\circ} 12'$ West, at 625 feet above sea level.

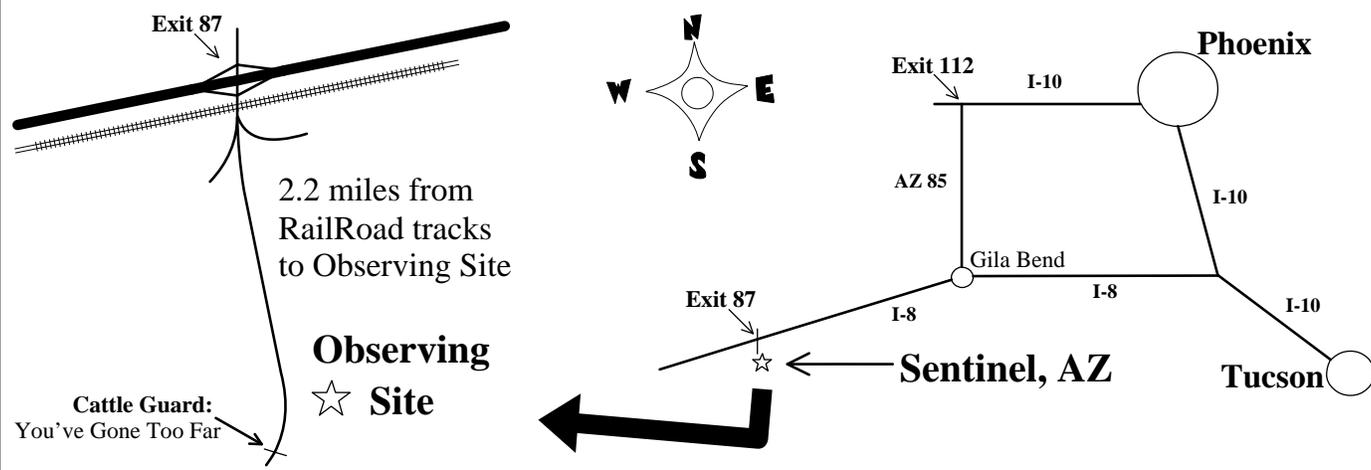
Although this is officially a one night event, frequently observers get a head-start by arriving the night before, to get an extra night of observing. If you decide to do this, bring plenty of shade and lots of water, it can get pretty hot during the day.

Sentinel is a two hour drive southwest from down-

town Phoenix. So, to arrive before sunset, please try to leave Phoenix by 5 PM. There are no facilities at the site, so please plan accordingly. Plan for hungry flying insects during twilight and cold temperatures at night.

Star Party Etiquette

1. **Do Not Litter!** If you bring it with you, please take it when you leave.
2. **No White Lights after Dark!** Use only dim red lights after sundown.
3. **Park Based on Your Observing Plan. Plan Your Departure.** Park facing towards the exit to avoid using your backup lights.
4. **Bring Observers Only.** Please leave small children and pets at home.
5. **Keep Noise to a Minimum.**



Steve Coe announced that the April 18th star party will include a novice group, all are invited. The following Saturday, April 25th, is the Sentinel Star gaze.

Adam Sunshine had the only non-eclipse show and tell for the evening. He showed a video of Iridium glints, which he saw as bright as magnitude -5 , each lasting about 3 seconds, and slowly faded in and out. Very nice video. [*Some of the glints video taped were done during daylight!* —Paul]

At the break, there were too many people to count, so I counted 83 chairs, which I believe were all filled, a great turnout.

After the break, vice president Gerry Rattley turned it over to Steve Coe for Eclipse slides and videos. There were 4 sets of slides and 3 videos.

Pierre Schwaar, Steve Redman, and Bill Waltz had videos. These showed the actual eclipse, the shadow passing over, and the excitement of all the people around. There were many ooh's and aah's heard on the video and in the room, along with a few choice words when the clouds came over.

Steve Coe, Wayne Young, Regina Lawless, and Tom Polakis had slides. These included the ship, the people, the islands, and of course the eclipse. There were many good and amazing slides, it was nice to see all aspects of the eclipse. A special thanks to Grant Klassen for manning the lights for the evening and taking the yelling and screaming from everyone telling him to turn the lights on and off.

After a very exciting evening, Paul adjourned the meeting and 28 of us reconvened at JB's to continue discussions.

—Ken Reeves, SAC Secretary

April Club Meeting

At the April SAC meeting Paul Comba will talk about how he's gone about discovering asteroids. At last count, he has found 380 asteroids. Previously he used photography to find asteroids, but now he's using a CCD camera.

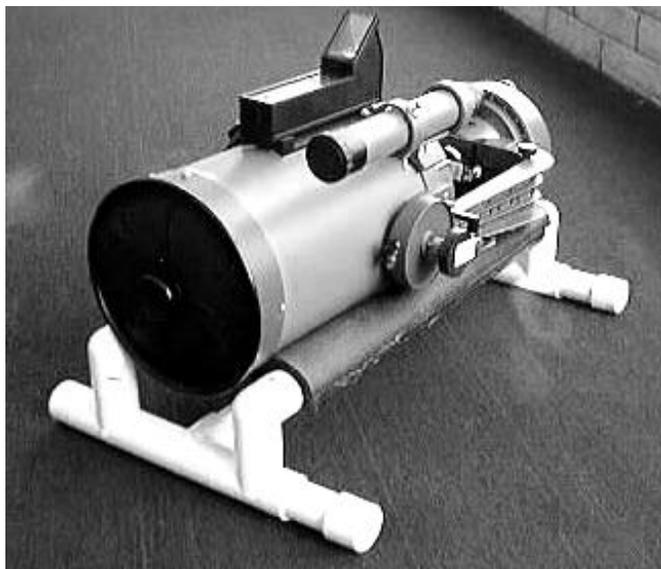
Next Novice Group Meeting

The next Novice Group meeting is planned for the April club star party at Buckeye Hills on **April 18**.

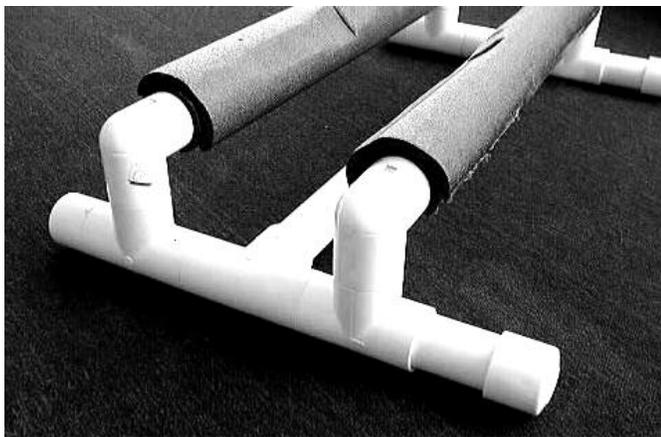
A.J. Crayon and Steve Coe will again set up and run a new session for people new to amateur observing. The current plan is to have some planned observing and a twilight talk. Then just allow folks to ask questions from then on. Because the Sentinel Star Gaze will be next weekend, one of the subjects will be star party etiquette.

Telescope Cradle

by Chuck Hilliker



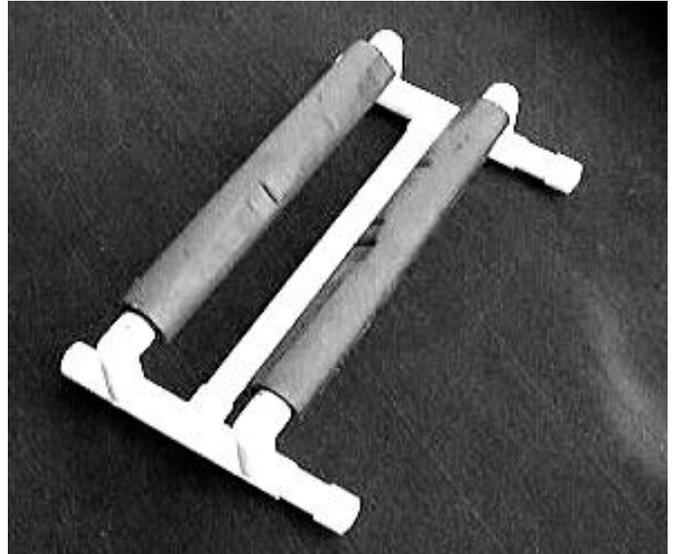
A cradle to safely transport your telescope tube can be easily fabricated. I came up with the idea and several members of the Sun City West Astronomy Club now have them. The photos show the final result.



The entire device is made of common “inch and a quarter” white PVC pipe. The length will be determined by the length of your particular telescope tube, 6 tee’s, 4

elbows, and 4 end caps. The array is cemented together to create a finished cradle (see photos). The top two rails that the telescope tube lays on are covered with half-inch foam pipe sleeve commonly used for temperature insulation.

Now, when I take my C-8 out to the dark sky location it can safely be carried laying across the back seat of my car.



SAC Board Meeting

Friday, April 3, 7:30 PM

The second board meeting for the year will take place on Friday evening, April 3rd. The meeting will again take place at Ken Reeves’ home. The meeting is mandatory for all officers and committee chairmen, but regular members are welcome too.

Ken’s address is 8845 W Seldon Ln. This is just less than a half-mile south of Olive Ave. (Dunlap Ave. in Phoenix,) on the corner of 89th Ave. It is the house on the SE corner. If you need directions, you can call Ken at 878-9460.

Newsletter Deadline

Mail items for Such-a-Deal at least two weeks before the end of the month. Articles that need to be published in a timely fashion must be submitted or the newsletter editor notified of the article at least 6 weeks before month they are published. Items arriving too late for an issue will be included in the next newsletter.

Fuzzy Spot

by Ken Reeves

Hydra

April 1998

Hydra is the largest constellation in the sky, extending through almost 8 hours of right ascension, and covering about 1300 square degrees. Although it covers such a large area, there aren't that many bright stars, and I have a hard time finding any obvious shape.

There are only five Herschel 400 objects and one of SAC's Best of the NGC objects, and these span the full extreme of the constellation, so if you want to get all of these in one setting, plan on a long night. In the spring time, this constellation provides some welcome relief from all the galaxy with a few globulars, planetaries, even some open clusters in the far western end.

I was asked to include some Messier object in my articles. I think this is a great idea, it will allow those who are working the Messier list to have input at the deep-sky meetings, and it reminds all of us to look at some of the best deep-sky objects in the sky. So this month and in future months, look forward to seeing some Messier object.

NGC 2548 (08h13.8 -05°48) This is one of the Messier objects that managed to slip into the Herschel 400 list. **M 48** is considered an error in Messier's original notes as there is no object at his specified location. Later it was determined that NGC 2548 was the object he observed. His notes apparently had an incorrect sign in his declination measurement from the reference star. This is an open cluster which is very large, very bright, elongated more or less E/W, and is visible in binoculars. At 35X, I counted about 95 stars, way too many to draw. There is a real nice grouping of about 8 stars in the middle, several chains and a lot of pairs. The center forms kind of an arch pointing to the W.

NGC 2811 (09h16.3 -16°18) This galaxy is hard to find due to lack of guide stars. At 100X it is somewhat bright, pretty small, and contains a stellar nucleus which especially shows up with averted vision. It is elongated N/S with a star near to the W.

NGC 3242 (10h24.8 -18°38) As opposed to NGC 2811, this planetary is very easy to find. At 70X it is fairly big, fairly round, no details at any power, but a green/blue color was noted. Neither averted vision nor the UHC filter did much to help bring out any detail, however, I did suspect a darker area in the middle.

NGC 4590 (12h39.5 -26°45) At 100X, this globular cluster, also known as **M 68**, is pretty bright, fairly big for a globular, and reveals 10 or so stars over some granular haze. Going up to 140X, the granular core is good, bright, and round, and some outlying stars seem to stand out a little bit better.

NGC 5236 (13h37.1 -29°52) **M 83** is an absolute jewel in the sky. At 100X this galaxy is very very large, very bright. It contains a very bright non-stellar nucleus, the halo is quite bright, much brighter than most galaxies. A lot of mottling was noted with possible counter-clockwise spiral structure, but this is hard to tell. An absolutely stunning galaxy, I would rate this as one of the best galaxies in the sky.

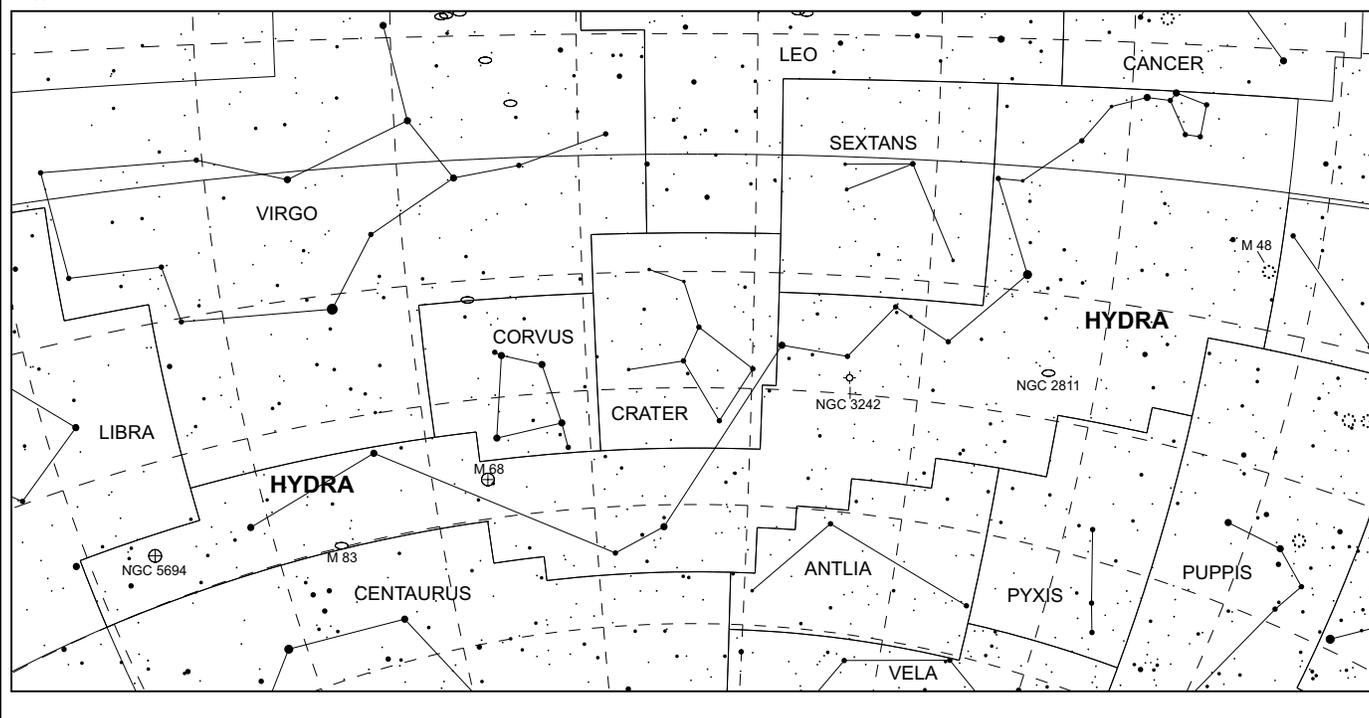
NGC 5694 (14h39.6 -26°32) This is a globular cluster at the far east end of the constellation. At 100X it is pretty small, fairly bright, with no stars resolved nor any granularity noted. There is a bright center, a faint halo, and 3 stars nearby. At 170X some granularity is suspected, but there is still no resolution at all. This globular is one of the furthest from us along with NGC 7006 in Delphinus and NGC 2419 in Lynx.

Herschel 400 Objects

2548, 2811, 3242, 3621, 5694

SAC's 110 Best of the NGC Objects

3242



April 1998

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> All Times are Mountain Standard Time </div>				PAS Meeting Brophy Prep. Physics Lab	SAC Board Meeting	Yesterday First Quarter Moon 1:20 P.M.
			1	2	3	4
Rest of U.S. goes crazy and moves their clocks forward one hour. Daylight-Savings Time starts	Mercury at inferior conjunction (moves into morning sky)		EVAC Meeting (SCC: Rm. PS170)		SAC Meeting Grand Canyon University, Fleming Rm. 105	Full Moon 7:31 P.M.
5	6	7	8	9	10	11
Astronomy Day		Sun City West Astronomy Club Meeting			Tomorrow Sun enters Aries 18 P.M.	SAC Star Party Buckeye Hills (members&guests)
12	13	14	15	16	17	18
Last Quarter Moon 12:53 P.M.						Sentinel Star Gaze Sentinel, AZ.
19	20	21	22	23	24	25
New Moon 4:43 A.M.						
26	27	28	29	30		

SAC Information

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		looka.fuzzy@mcione.com
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		ken.reeves@cas.honeywell.com
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		asunshine@netzone.com
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		rhwalker@aztec.asu.edu
Deep-Sky Group	A.J. Crayon	938-3277
		acrayon@primenet.com

E-Mail Mailing Lists

SAC-mls is a mailing list for club announcements and quick notification of astronomical events.

SAC-Board is for SAC business. All club members are welcome to participate.

AZ-Observing is a fairly general mailing list about observing in Arizona. Where the star parties are and who's going, as well as what's up.

To join, send E-mail with the Subject: subscribe to the "-request" mailing address at psiaz.com. For example, you would send the request for AZ-Observing to AZ-Observing-request@psiaz.com.

SAC Web Sites

www.accessarizona.com/groups/group_access.html
 www.primenet.com/~dickson/sac.html

Saguaro Astronomy Club Member Services Form

Membership

Memberships are for the calendar year and are prorated as follows: Jan - Mar 100%, Apr - Jun 75%, Jul - Sep 50%, Oct - Dec 25%.

- \$28.....Individual Membership
- \$42.....Family Membership (one newsletter)
- \$100.....Business Membership (includes advertising)
- \$4.....Nametag for members
- \$14.....Newsletter Only

Subscriptions

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.

- Sky & Telescope.....\$27.00 for one year
- Astronomy.....\$20.00 for one year

Write your name, address, phone number, and E-mail address in the space below.

Make checks payable to SAC.
Mail the completed form to:

Jack Jones
SAC Treasurer
2313 W Sierra St
Phoenix AZ 85029

SAC and SAC Meetings

Saguaro Astronomy Club (SAC) was formed in 1977 to promote fellowship and the exchange of scientific information among its members — amateur astronomers. **SAC** meets monthly for both general meetings and star parties, and regularly conducts and supports public programs on astronomy.

SAC meetings are usually held on the Friday nearest the full moon. This means that over the course of the year, meetings are not held on the same week of the month. The same is true of the club's star parties. Star parties at Buckeye Hills Recreation Area are mostly held on the Saturday of the third quarter moon.

SAC General Meetings: 7:30 PM at Grand Canyon University, Fleming Building, room 105 — one mile west of Interstate 17 on Camelback Rd, north on 33rd Ave., second building on the right. See inside for a map to the meeting location.

1998 SAC Meetings

Jan. 9
Feb. 13
Mar. 13
Apr. 10
May 8
Jun. 12
Jul. 10
Aug. 7
Sep. 11
Oct. 2
Nov. 6
Dec. 5 Party

1998 SAC Star Parties

Date	Sunset	Moonrise
Feb. 21	6:18PM	3:40AM
Mar. 21	6:39PM	2:23AM
Apr. 18	6:59PM	1:08AM
May 16	7:19PM	11:54AM
Jun. 20	7:37PM	3:27AM
Jul. 18	7:34PM	2:10AM
Aug. 15	7:12PM	12:57AM
Sep. 12	6:37PM	11:45PM
Oct. 10	6:00PM	10:32AM
Nov. 14	5:27PM	3:48AM
Dec. 12	5:22PM	2:35AM

SACNEWS

c/o Paul Dickson
7714 N 36th Avenue
Phoenix AZ 85051

Stamp

First Class Mail

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