

Saguaro Astronomy Club

Metro Phoenix, Arizona

SACNEWS

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2:00 AM in the Swamp by Liz Peterson

Sometimes I get the feeling we don't know how good we have it in the deserts of Arizona. Liz Peterson is a member of the Atlanta Astronomy Club and the following is reprinted with the permission of the Atlanta Astronomy Club.

Frequent goers to the Villa Rica observing site will admit that they prefer not to be out there alone. The fatigue of long observing sessions can create a strange perception of the sounds of the swamp; shadows become suspicious, and a feeling of unease begins to grow. Suddenly the welcome darkness becomes threatening. On my last solo visit to our hallowed grounds I took a radio to keep me company.

Before dark I picnicked on sliced turkey, crackers, and pickles from a large brown paper bag. Diet Coke and insect repellent were also in the bag, which I left outside the observatory while I worked. Hours of obsessive observing brought the universe into view: clusters, galaxies, and planetary nebulae filled me with wonder, while WABE soothed the frantic sounds of the swamp's insects and tree frogs. I turned the 10" to Delphinus to search for Comet Wilson.

Suddenly my communion with the stars was interrupted by a sound which froze my blood: ow-ow-ow-oooh! A long wailing howl broke out and floated towards me across the swamp. I climbed the observing ladder and looked east to see the yellow waning gibbous moon hanging over the treetops, a thick white mist enshrouding the land. Ow-ow-ow-oooh!, it came again. WABE had no power over this sound.

I scanned the mist between the trees expecting to see some great dark shadow moving towards me. Nothing. I pulled myself together, closed the observatory door, turned up the radio, and went back to work. No sign of Comet Wilson. The stars gave way to images of the bats I had seen flying at twilight, and a big black cat which lingered a moment to observe me before continuing its nightly hunt. Ow-ow-ow-oooh! One more sweep revealed nothing but stars; the light of the waning moon was too

much for the 10th magnitude comet.

Time to go home. I quickly gathered my charts, performed the rituals of closing, and went down for my bag. It was gone! I searched the area with white light. Five cans of Diet Coke, a can of Deep Woods Off, a box of crackers, and assorted trash in a wet brown paper bag should not disappear silently without a trace. I thought of the possibilities. A dog or raccoon could have snatched the bag, but the wet paper could not have supported the weight. There must be a trail of the contents close by. Boldly I searched, tear gas in one hand and flashlight in the other. I wanted to find a trace of my goods to dispel my growing belief in swamp monsters, but I found nothing.

The mist came ever closer and the relentless howling aroused a terror in me that I could not quell. I abandoned my search and drove home. So ended my vigil on the night of the autumnal equinox. I won't say I believe in swamp monsters. Maybe a swarm of mosquitoes carried away my bag. Maybe — maybe I'll never know. But I do know that this is one astronomer you'll never find alone by the swamp at 2:00 AM.

Great Red Spot by Jim Van Nuland

This month closes another chapter in the continuing dram of the Great Red Spot. With Jupiter setting earlier, and the Sun setting later, the window has rapidly closed. Though Jupiter will be visible for another month, seeing will be a problem in the low sky. So this column will take a somewhat-deserved vacation, to study Other Interests. My thanks to those who have encouraged me with your report and questions.

Great Red Spot on Meridian MST

D	M	d	time	D	M	d	time
M	4	30	812pm	M	5	14	957pm
W	5	2	950pm	Sa	5	19	908pm
Sa	5	5	724pm	Th	5	24	815pm
M	5	7	909pm	Th	5	31	901pm
Sa	5	12	810pm	Tu	6	5	818pm

Through the 1989–90 season, we have seen the Great Red Spot better than for many years, and have had the ad-

ditional large surprise with the fading of the South Equatorial Belt. Take this last opportunity, as the SEB may be back by the time Jupiter is again observable.

At the predicted times, the Spot will be facing nearest the Earth, and so will appear on the central meridian of the apparent disk of the planet. The Spot moves its own length in about 40–50 minutes. Good seeing and a power of about 200–300 are needed. Begin half an hour before the given time. Focus carefully, then scan the southeast quadrant of Jupiter. Watch carefully for those moments when the air is especially stable, and the Spot will show itself in all its glory.

To tell the author about your observations, write Jim Van Nuland, Calico Observatory, 3509 Calico Ave., San Jose, CA 95124 (408) 371–1307.

Comet Comments by Don Machholz

One new comet has been discovered recently, this is only the second comet of the year. Yet we still have four comets easily visible. Comet Skorichenko-George (1989e₁) is one of the two evening sky comets. It swings around the back side of the sun in June; when it emerges into our morning sky in late August it should be near magnitude 11.

Comet	Skorichenko-George		(1989e ₁)		
Date	RA-1950-Dec	RA-2000-Dec	Elong	Sky	Mag
04–24	03h34.9m +38°47'	03h38.2m +38°55'	33°	E	8.8
04–29	03h54.5m +37°35'	03h57.8m +37°44'	31°	E	8.9
05–04	04h13.1m +36°19'	04h16.4m +36°27'	29°	E	8.9
05–09	04h30.6m +34°58'	04h33.9m +35°05'	27°	E	9.0
04–04	04h47.2m +33°34'	04h50.4m +33°39'	24°	E	9.1

Periodic Comet Schwassmann-Wachmann 3 has an orbital period of 5.4 years but is often missed due to poor placement. This time around it is favorably placed, only 34 million miles from earth in mid-April. A month later it is at perihelion, 86 million miles from the sun. While you are waiting for Comet Austin to rise, take a look at “SW 3”.

Periodic	Comet	Schwassmann-Wachmann 3			
		(1989d ₁)			
Date	RA-1950-Dec	RA-2000-Dec	Elong	Sky	Mag
04–24	20h54.7m –08°58'	20h57.4m –08°47'	80°	M	9.9
04–29	21h34.1m –09°42'	21h36.7m –09°28'	75°	M	9.8
05–04	22h10.0m –10°05'	22h12.7m –09°50'	72°	M	9.8
05–09	22h42.2m –10°11'	22h44.8m –09°55'	69°	M	9.9
05–14	23h10.7m –10°02'	23h13.3m –09°45'	68°	M	10.0
05–19	23h36.0m –09°42'	23h38.6m –09°25'	67°	M	10.1
05–24	23h58.4m –09°15'	00h01.0m –08°58'	66°	M	10.3
05–29	00h18.5m –08°42'	00h21.0m –08°25'	66°	M	10.5
06–03	00h36.5m –08°06'	00h39.0m –07°50'	67°	M	10.7
06–08	00h52.8m –07°29'	00h55.4m –07°13'	68°	M	11.0

Comet Austin, now in the morning sky, should be visible to the naked eye. Early hopes that it would reach first or even zero magnitude evaporated when the orbit was determined to be hyperbolic, indicating that the comet is new to the Solar System. This meant that early rapid brightening was due to “burning off” of the most volatile gases, leaving only a “slightly brighter than average” comet beneath. But even such a comet can look good if placed well, and this comet has good placement.

Comet	Austin		(1989c ₁)		
Date	RA-1950-Dec	RA-2000-Dec	Elong	Sky	Mag
04–24	00h42.5m +35°42'	00h45.2m +35°59'	30°	M	1.4–3.6
04–27	00h27.3m +36°00'	00h29.9m +36°17'	33°	M	1.7–3.7
04–30	00h11.2m +35°53'	00h14.8m +36°09'	37°	M	1.9–3.7
05–03	23h53.9m +35°20'	23h56.5m +35°37'	42°	M	2.1–3.6
05–06	23h34.8m +34°22'	23h37.3m +34°38'	47°	M	2.2–3.6
05–09	23h13.1m +32°50'	23h15.5m +33°06'	53°	M	2.3–3.5
05–12	22h47.7m +30°34'	22h50.1m +30°50'	61°	M	2.3–3.4
05–15	22h17.5m +27°13'	22h19.8m +27°28'	70°	M	2.3–3.2
05–18	21h41.5m +22°21'	21h43.8m +22°35'	82°	M	2.3–3.1
05–21	20h59.2m +15°30'	21h01.6m +15°42'	96°	M	2.3–3.0
05–24	20h11.8m +06°40'	20h14.3m +06°49'	112°	M	2.4–2.9
05–27	19h22.6m –03°07'	19h25.2m –03°01'	130°	M	2.6–3.1
05–30	18h35.7m –12°06'	18h38.5m –12°03'	147°	M	3.0–3.3
06–02	17h54.5m –19°08'	17h57.4m –19°09'	162°	M	3.4–3.7
06–05	17h20.3m –24°08'	17h23.4m –24°11'	173°	M	3.9–4.1

In mid-April from mid-Northern latitudes, Comet Austin rises about one hour before sunrise. In early May this time increases to four hours. My late May it rises near evening astronomical twilight and is up nearly all night long. The moon will provide little or no interference between April 21 and May 6, then again between May 20 and early June. In the ephemeris above I include two magnitude estimates, the comet will probably fall somewhere between them. The first is derived from an absolute magnitude of 5.0 and an “N” value of 4.0, this typifies a bright normal comet. The second set of magnitudes uses data similar to that of Comet Cunningham, which in 1941 displayed pre-perihelion behavior similar to that of Austin. As for tail appearance, the gas tail should be visible, you might want to try various filters on this. But dust production on Comet Austin has been low so the dust tail may not be prominent.

Comet Cernis-Kiuchi-Nakamura (1990b): This comet was discovered in the evening sky on March 14 by Kazimieras Cernis from Vilnius in the (politically-troubled) land of Lithuania. He was using a 5” refractor to find this, his third comet. Thirty-nine hours later two Japanese amateurs picked it up, T. Kiuchi, using 25x150 binoculars and Y. Nakamura, using 20x120 binoculars.

The comet was closest the sun at 1.07 AU on March 16, it is now pulling away from both the earth and the sun. During the next few months it remains in our evening sky, slowly dimming. The ephemeris shows that the comet could have been discovered in the evening at

magnitude 10 in mid-January or at magnitude 9 in mid-February, if it had followed a normal brightness curve.

Comet	Cernis-Kiuchi-Nakamura (1990b)		Elong	Sky	Mag
Date	RA-1950-Dec	RA-2000-Dec			
04-24	06h06.2m +47°13'	06h10.0m +47°13'	61°	E	9.1
04-29	06h39.4m +44°16'	06h43.0m +44°13'	62°	E	9.3
05-04	07h08.1m +41°01'	07h11.5m +40°56'	62°	E	9.5
05-09	07h32.7m +37°39'	07h36.1m +37°32'	63°	E	9.7
05-14	07h54.1m +34°17'	07h57.3m +34°09'	62°	E	10.0
05-19	08h12.8m +31°01'	08h15.9m +30°51'	62°	E	10.3
05-24	08h29.3m +27°53'	08h32.3m +27°42'	61°	E	10.5
05-29	08h44.0m +24°54'	08h47.0m +24°43'	60°	E	10.8
06-03	08h57.4m +22°06'	09h00.3m +21°55'	59°	E	11.0
06-08	09h09.6m +19°28'	09h12.4m +19°16'	58°	E	11.3

Bits and Pieces

Deep Sky Meeting

The Deep Sky meeting will take place at the McGrath's on Thursday, May 17 at 7pm. Directions are in the directions section below.

1990 SAC Meetings

May 11
June 8
July 6
August 10
September 7
October 5
November 2
December 8

1990 SAC Star Parties

May 19
June 16
July 14
August 18
September 15
October 13
November 10
December 15

Riverside Telescope Makers Conference

The 22nd Annual Riverside Telescope Makers Conference will be held May 25th through the 28th. It will be held at the Y.M.C.A. Camp Oakes which is eight miles east of Big Bear City on Highway 38 at Lake Williams Road. This location is about 50 miles northeast of Riverside in the San Bernardino mountains at an elevation of 7,300 feet. Highway 38 off Interstate 10 in Redlands.

For those of you who didn't get one of the handouts at the April meeting, or want more information about this conference, phone Gene Lucas (934-1889).

Minutes of the March Meeting

President Pete Burggraaf brought the meeting to order at 7:30 PM. The first order of business was upcoming events (see attached calendar for May's events). The proposal to continue the club's membership in the International Dark-Sky Association was reintroduced and passed with no dissension. Vice-President Virginia Campbell gave an update on speakers for the next few months and asked the membership for ideas as to what topics we

would like future speakers to cover. At the break, the annual Swap Meet was held.

After the break, SAC members Tom Polakis and Pierre Schwaar were the speakers. Tom gave a talk and slide presentation on his years with SAC. Pierre presented a 15 minute video presentation on the moon, complete with background music. —*Phil Dahl, SAC Secretary*

Directions to SAC Events

SAC General Meetings 7:30 PM at Grand Canyon University, Fleming Building, Room 103 — 1 mile west of Interstate 17 on Camelback Rd., north on 33rd Ave., second building on the right.

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.

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.

Flatter Starfields A Paracorr Review by Dan Ward

A few months ago, I was given the chance to field test one of the new Paracorr's, produced by Televue. I tried the 2" model. It is also available in a 1.25" version. In a nutshell, it resembles a barlow and works in a similar way — you slide the Paracorr into your focuser, then slide your eyepiece into the Paracorr. It does have a slight magnification effect so that you could consider this a 1.15x barlow — except that it is designed to optimize a field flattening effect. The ads claim that it will take the coma out of a fast telescope.

Night sky tests were done with 11mm and 16mm Televue Naglers, a 14mm Meade UW, plus a 26mm Televue Plössl. I used my 13.1" f4.5 Dobsonian — a heavily modified Coulter Odyssey scope whose collimation was tweaked to the limits of the scope for this test. Various other folks participated in my tests on a cold December night at Buckeye Hills, Arizona. We used the Double Cluster in Perseus as our main test object, as it provided a nice, wide starry field.

The 11mm and the 14mm eyepieces have pinpoint star images to the edge of the field in this scope. The Paracorr could hardly improve upon the field of view, but we checked to see if there was any noticeable effect. The slight barlow effect generated a higher power view, so we only noticed the changes one normally expects — a slight change in the contrast and a narrower region of the sky

being covered. With the 26mm Plössl, there was a similar result — no big change other than the slight increase in power. The conclusion was that the Paracorr did not “improve” an already good view, but it also did not degrade it. The only real difference to our eyes was the slight increase in power.

The 16mm Type II Nagler was a different story. In this scope, the outer 20% of the field of view had noticeable coma when we used this eyepiece by itself. With the Paracorr, there was still some coma — but only in the outer 5% of the field. It really did knock the curves right out of the star field.

Perception of coma seems to be a highly individualized issue at the eyepiece. I have severe astigmatism and find that arcs instead of pinpoints are highly objectionable. I know some very good observers that are quite happy with views which I think look like a bad fisheye lens! I've heard others say “Wow!” for a view that I would call “Yuck!” Obviously, this is a matter of an acquired taste! That's why the idea of a coma corrector device was so attractive to me — but it may not be an issue for observers who have learned to love those distorted “porthole” views.

The Paracorr did its promised work on the Type II Nagler, but I wanted to see it work with other eyepieces. On the recommendation of a friend, I decided to also test it with low power Plössls. These excellent eyepieces have a tendency to reveal quite a bit of coma in a fast scope. However, my work schedule kept knocking me out of the good viewing evenings. So I used a daytime test with the Plössls, looking at a variety of parallel such as telephone lines, brick walls, etc.

My friend was right, I could definitely see the improvement generated by the Paracorr in the edge of the field of view of these eyepieces. On both a 32mm and 40mm Plössl, the edge improved substantially — similar to the effect on the 16mm Nagler. Lines that seemed slightly distorted at the edge of the field were clean when the Paracorr was added to the optical path.

The improvement was equal for both eyepieces. Others have told me that they have seen good improvements when using a Paracorr for prime focus photography. My scope is not set up for photography, but it seems reasonable to expect good results. The optical element portion

of the two inch model unscrews to reveal a T-Thread mount for photography.

I have no hesitation to confirm that the Paracorr performs. It really does reduce coma. If you find you have problems with coma, the Paracorr could be your answer. Discounted prices in recent astronomy magazines were under \$300 for the 2 inch model.

Such-A-Deal

SUCH-A-DEAL is a place to advertise equipment, supplies, and services related to amateur astronomy. This is a free service for SAC members and friends. SAC is not responsible for the quality of advertised items or services.

Telescope—10” Newtonian on “Lil Big Foot” mount built by Pierre Schwaar. Piccadilly on/off axis guiding. RA and DEC drives, drive corrector, 2 plössl eyepieces, 3X University Optics Barlow, 7x50 straight through finder. \$1400 David Owings, before 2PM 772-9304, after 3:30 PM 869-1051.

Telescope—4” Astrophysics Starfire refractor; alt-azimuth head; aluminum tripod; telrad finder; 50mm ocular; manufactures carrying case. \$1200 firm. Tom Good 954-8963.

Telescope—Meade Model 2080/LX3, 8”, Schmidt-Cassegrain; Hardly used—excellent condition; Multi-coated/Silvered Optics group; quartz electronic LX drive system (never used); equatorial wedge; 9.7 mm & 26 mm Super Plössl eyepieces; 2 filters; foam lined carrying case; field tripod. Asking \$975. Call Marty Wicoff at 246-1105 (ans. mach.).

For Sale—80mm Brandon Apochromat, 32mm 2” O.D. eyepiece, 2” O.D. mirror diagonal, 20mm erffe with 1.25” diagonal and amici prism and necessary adaptors. \$600. Dwight L. Bogan, 277-4297 home, 231-3906 work.

Lumicon Off-Axis Guider—for SCT astrophotography. Includes camera adapters for Minolta and Olympus cameras. Excellent condition. \$200. Dan Ward 998-4033.