

TSE2002

John Dennis (who will pilot the Croydon 747 flight) and John Black (who gave me an introductory flight deck and avionics familiarization for the QA B747-400 aircraft). A separate posting to SEML on that will shortly follow. Cheers, Glenn Schneider

SE2002 Solar Eclipse Newsletter Special

From: solareclipsewebpages@btopenworld.com To: SOLARECLIPSES@AULA.COM Date: Thu, 12 Dec 2002 07:41:15

Dear All, Please send us your accounts, pictures and webpage links for the Solar Eclipse Newsletter TSE2002 Special. Closing date for this special newsletter is 20 December so we all have a good Xmas reading with the SENL Special. Thank you. Best regards, Patrick

How we outran the clouds in Northern South Africa ...

From: Daniel Fischer To: SOLARECLIPSES@AULA.COM Date: Thu, 12 Dec 2002 15:15:22

... and got to see the Dec. 4 total eclipse in clear skies West of Musina is told in <http://www.astro.uni-bonn.de/~dfischer/skyreports/rsa2002> - actual pictures will be added soon. This is the first time in my chasing 'career' (with now 11 total and 5 annular eclipses) that such a maneuver actually worked: either it didn't (twice) or wasn't even tried or it wasn't necessary at all (in the majority of the cases, fortunately). I must say that the early morning dash to the West added a lot of excitement to the eclipse ...
Daniel



Daniel Fischer in Messina with his Howling Moon 4 wheel drive (picture by PP)

Eclipse report

From: Fraser Farrell To: SOLARECLIPSES@AULA.COM Date: Thu, 12 Dec 2002 15:37:57

To all, My report on the 2002 Dec 4 total eclipse, as seen from near Termination Hill (between Lyndhurst & Lake Torrens), is now online: <http://astronomy.trilobytes.com.au/2002/dec4.htm>

And thanks to Banksia Adventures for sponsoring my first trip as an eclipse tour guide :-) cheers, Fraser Farrell

A splendid wideangle view of the eclipse ...

From: Daniel Fischer To: SOLARECLIPSES@AULA.COM Date: Thu, 12 Dec 2002 21:13:06

... above "our" baobab tree has been added to the expedition report at <http://www.astro.uni-bonn.de/~dfischer/skyreports/rsa2002> - and that's not even the full resolution version! Daniel

From: KCStarguy@aol.com

Daniel beautiful photo- seems like a contrail in the sky.what was exposure and f stop? nice account too Dr.Eric Flescher (kcstarguy@aol.com)



Kruger Eclipse Champagne (picture by PP)

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Success from Kezi, Zimbabwe

From: Crocker, Tony (FSA) To: "'SOLARECLIPSES@AULA.COM'" <SOLARECLIPSES@AULA.COM> Date: Thu, 12 Dec 2002 17:11:21

I was one of 5 guests in Peter Tiedt's tour group near Kezi, Zimbabwe in perfect clear skies. The specific site was selected by the resorts The Farmhouse (where we were staying) and nearby Camp Amalinda. Cars were parked and after-eclipse brunch set up on a flat granite outcropping just off the Matobos road. With his extensive scope, computer and camera gear Peter set up in this area. A higher rock outcropping with a water reservoir was accessible by 5 minute hike through the bush. I opted to observe from this latter location, which had a 360 degree horizon view. With the umbra path moving NW to SE, I observed from the NE side of the reservoir with about 20 people from the 2 resorts.

Given my camera distraction in 1999 and a 79 second eclipse I took few pictures, all at fast exposure with no tripod. I wore binoculars around my neck, and my wife Becky and I both wore the Glenn Schneider eyepatch for the last half hour before totality. We were rewarded with an impressive corona very different from 1999. There were four double corona streamers in an imperfect cross pattern, visible out to maybe 3 diameters. I saw 2 prominences at 12:30 and 6 o'clock, more modest in size than 1999. The other noteworthy difference was that it didn't seem very dark vs. 1999. This could have been due to the narrower path, adaptation from the eyepatch or particular characteristics of this eclipse.

2 Danes on Peter's tour arrived on the same rock as I well after first contact and set up on the SW (opposite) side of the reservoir. I unfortunately did not realize until later that they had a tripod-mounted viewing scope and a sheet upon which they viewed shadow bands.

In Kezi we had perfect weather and a superb viewing site. Most of the resort guests were white Zimbabweans from Harare, as most foreign tourists have chosen to go elsewhere with Zim's current negative publicity. As tourists we felt safe with only minor inconveniences like carrying extra fuel in cans and managing the black market currency. It is the unfortunate citizens of Zimbabwe who are really suffering from the policies of their megalomaniac dictator. They must round up scarce hard currency and then cross borders to get food and fuel. In the curio marts they often wished to be paid in USD at 900-1200 to 1 ("official" rate is 55 to 1) or to trade for articles of clothing, pens or empty water bottles.

Good report from Jonathan Kern in Messina, South Africa

From: Jay.M.Pasachoff@williams.edu To: solareclipses@aula.com Date: Wed, 04 Dec 2002 20:18:28

[note that SA stands for both South Africa and for South Australia, where Ceduna is located. A Slovakian team was located at a site we reserved, checked by the Winters of icstars.com, also in Messina, but we haven't heard from them yet. Jay Pasachoff

----- Forwarded Message From: Jonathan Kern Subject: Eclipse successfully observed

We arrived in Messina late Sunday afternoon after an all day drive from Kruger Game Park. Spectacular drive through mountains into North-East South Africa. Temperatures rose along the way. Monday dawned cloudless and very hot. Seemed as hot as Mauritania in '73. We are hosted in a private residence in Messina and setup our instruments in the backyard. Private and secure with a 7' masonry fence surrounding the yard as well and 2 Golden Labrador guard dogs. Alignment went smoothly. Monday afternoon we drove 12km to the Zimbabwe border and looked across the bone dry Limpopo river. Apparently this region, including Zambia is experiencing a severe drought. Tuesday morning dawned clear again, but I could see clouds on the distant Southern horizon early in the day. I arose at 3am local time (GMT +2:00) this morning and observed dark southern skies. Even in town with a few streetlights I could see +5mag. Magellanic Clouds are always a special treat to observe. By 4am I could perceive that clouds were obstructing large areas of the sky, and by sunrise the sky was 50% scattered. Things kept getting worse at by first contact (7:12am) things looked bad. ~80% scattered. The sky looked bleak until ~8am when a few openings appeared. I was able to track and set drive rates through the holes that passed our way. The final 15 minutes before second contact things began improving and totality was observed through a hole that passed our way just at the right moment. There were 2 levels of clouds. High cirrus

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drifting to the North and low running scud coming from the ENE. Totality was predicted to last 68s in Messina. I ran a sequence of 4 exposures with the Newkirk camera. 2, 5, 40 and 10 seconds. Only towards the end of the 40s exposure did I observe some very tenuous low clouds moving into the field of view and they were so wispy that I decided to continue the exposure rather than cut it short. Everything went smoothly with the equipment and I will try to process the 120 roll film from the Newkirk camera when we arrive in Johannesburg tomorrow. We will stay there 2 days and depart for home Saturday night and arrive back in Baton Rouge Sunday afternoon. Jan and Jonathan



Group set up at Singelele Camp, Messina (picture by Jean Deleu)

From: analog6@ozemail.com.au

Dale & Eric I am a member of a digital photography group and will try the members to see if anyone can shed some light on this. The other list member who may have an idea is Joe Cali, who is also involved in photography. Will report back, probably not til the weekend though (14/15 Dec) Odille Esmonde-Morgan Canberra Australia

From: analog6@ozemail.com.au

Robert Do you have a more precise link - I searched the site and could not find it? Odille Esmonde-Morgan

From: Robert B Slobins

OK...it took all night and a call to Adobe customer support. Here it is:

It is a 17-page tutorial on the subject by Russell Brown. Mr Eclipse's site also references this paper.

The URL is www.adobe.com/print/tips/phseclipse/main.html. You can try to access it from www.adobe.com's list of tutorials and tips. This URL came from the first page of a google.com return from a search on Photoshop and eclipse. Hope this helps and have fun. --rbs

From: Fabio Pettinati

Try <http://www.adobe.com/print/tips/phseclipse/main.html> . I found the URL by searching for "Adobe eclipse" on Google.

Regarding the many different techniques available to process eclipse images to create the "perfect" composite, my experience is that most of them create rather artificial looking images. I tried many different techniques to process my TSE1999 and TSE2001 photos and the results can vary dramatically. The frustrating part is that the generic process is conceptually simple: for each image mask out the portions that obviously overexposed, then combine the images adjusting their brightness and transparency until satisfied. The problems people face include the fact that exposures are not perfect, and the lack of a foolproof way to mask images without lots of manual retouching. The other issue is that when you start combining your images, from let's say 1/1000s all the way to couple of seconds, guess what: the moon has moved relative to the disk

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of the sun. This means that some image details close to the rim of the sun disk won't be present in all the images. This creates noise and artifacts.

The advantage of Jon Kern's approach is that the image captured on film is already filtered (non-linearly) and the variation of brightness in the corona flattened to more manageable quantities. This means that the film will not be as over-exposed as in the case of when no filtering is done. When the film is overexposed, there is simply no data available, and no amount of Photoshop tinkering will ever get it back. It is rather fascinating to see that Wendy Carlos' composites have improved significantly over the years, and that quality took a quantum leap in improvement after she began using Kern's images as part of the composite mix.

Which brings me to a simple question: "how can we, mere mortals, recreate the filter that Jon Kern uses?" Perhaps someone would be interested in "masss producing" (OK, just a couple 100 units) these filters tailored to a specific telescope focal length. Fabio Pettinati San Jose, CA, USA

From: Dale Ireland

Hi I have read it before and have a copy on my hard drive, PDF, if anyone can't find it. Jerry Lodriguss has the best site for learning various eclipse compositing techniques. Most are geared towards coronal streamer enhancement http://www.astropix.com/HTML/J_DIGIT/E_COMP.HTM Dale

From: Robert B Slobins

It is my opinion that we should produce a print with as much information as possible as what is on the negative. I am sure that there are several techniques to accomplish this.

When I was in and around New York City, I used rental darkrooms that contained professional-level enlargers, and at least a 30-inch Colenta or similarly-branded chemical RA-4 processor. Since my subject matter was not in competition with the professional free-lancers who shared the facility with me, some of them were very helpful, especially with colour balancing.

One thing disallowed in professional work is leaving highlights and shadows blocked out. So for things like solar corone, comet heads, and auroral curtain bottoms, one had to become adept at burning.

What worked for me is to take a negative of the eclipse and make a test 'strip' or in this case, 'pie' of the corona to determine just how much corona is visible given an exposure on paper. Then, depending on the measured shape of the corona, I

cut out an ellipse mask and if needed a circle mask from corrugated cardboard. The circle mask was for inner coronal exposures and darkening the moon. (Yes, there are lunar features on the negatives, but I have my limits to what I was willing to do!)

Then I set up a burning-in programme and after getting the colour balance correct--the corona is white--made my prints. It usually took longer for me to print the image than the totality and I often had problems with the paper's reciprocity characteristics and colour shifts (until I bade Kodak materials farewell).

I was therefore able to wring out all the major details of the solar corona and chromosphere from one negative. I do not produce an image of every streamer in excruciating detail. I do obtain a pleasant artistic print that comes close to what the naked eye sees, or at least for smaller-scale images, the 'body' of the corona.

The moral of this long-winded story is to have an objective in mind for the image and to interpret the image according to how YOU saw it. If I were to jury this group of eclipse images, I would look for not only technique but also an artistic or personal viewpoint. I want the photographer to tell me a story.

Of course, I am interested in doing the equivalent of the above darkroom technique digitally.

Also, one problem I have with the Newkirk filter is how does one anticipate the corona's shape. If there is any deviation between the corona's shape and the filter's, then we get that black ring within the coronal streamers. --rbs

From: Joel Moskowitz

This ism only true with reversal film. With negative film, overexposed areas will contain information. The rule in photography is to underexpose slide film and overexpose negative film. Joel M. Moskowitz, M.D. 8 (total)solar eclipses and counting



Eclipse from Messina by Jean Deleu

Spaceweather pics

From: KCStarguy@aol.com To: SOLARECLIPSES@AULA.COM Date: Tue, 10 Dec 2002 22:04:49

http://science.nasa.gov/spaceweather/eclipses/gallery_04dec02.htm Check out some of the pictures as spaceweather from Australia and Africa. Nice picture of partial stage with tree in background but can't believe the person did not try for path of totality

I suspect there will be more. Dr. Eric Flescher

From: Evan Zucker

Thanks for the link! I was wondering when spaceweather.com would finally post some photos.

>Nice picture of partial stage with tree in background but can't believe >the person did not try for path of totality

I certainly believe it. The population of Adelaide is just over 1-million, and I'll bet you that about 99% of them didn't bother to travel 300 km to see totality. In fact, I'd be surprised if even 1% of them observed totality. Of course, it didn't help that the Australian government and media had them scared to death of going blind, but it probably wouldn't have made that much difference anyway. I find that people tend to be lazy, especially when it comes to astronomy. -- EVAN

From: Mike Simmons

At 06:16 PM 12/10/2002, Evan Zucker wrote: I find that people tend to be lazy, especially when it comes to astronomy.

My sister-in-law lived in the path of totality in 1979 but refused to get out of bed to see the eclipse. Mike Simmons

From: Robert B Slobins

Evan:

1--Does anyone here really want to have a crowd of a million people around his site during totality?

2--Generally, one gets out of an activity what one puts into it. This includes astronomy. How many people will get worked up that much to go out of their way to see what is up in the sky locally like the Geminids this weekend, let alone a total solar eclipse or aurora?

It required marrying me for my wife to pay attention to what is up in the sky. She could not have cared less about the eclipse of 1994, even though she could have taken a bus ride to Curitiba to see it. She had and has other interests and talents.

She is not lazy. She is my field director for my solar eclipse expeditions.

Yes, many people are lazy. The laziness extends to most other things besides astronomy. If you can package astronomy as a mere afterthought to entertainment, then you can pack a planetarium in the USA or get 'em out at 1AM to stand in the cold waiting for a meteor shower. --Robert B Slobins

From: analog6@ozemail.com.au

They are nice shots, and I think I know the David Johnson who took the tree one, he works for the railways and ususalu (like me) is out photographing trains. We actually passed some cars heading away from Lyndhurst just 30 mins before totality - they obviously could not be bothered to hang about just for an eclipse.

Whereas we drove like lunatics for a day and a half to get there with 20 mins to spare! It was wonderful but much too SHORT! (I totally forgot to look for shadow bands!) Odille Esmonde-Morgan

From: Dale Ireland

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Evan It wasn't just an afternoon jaunt from Adelaide to the eclipse, We talked to some people on our last day who said the main highway out of Adelaide to Lyndhurst looked like the road of death out of Kuwait in 91, strewn with the smoking remains of overheated VW buses (psychedelically painted) on their way to or from the rave that was publicized for Lyndhurst. The south Australia Astronomical Society did an amazing job for hundreds of people from all over the world. They popularized the event, coordinated our viewing "safari", distributed eclipse shades etc etc. Janita and her husband rob Hill arranged Adelaide hotels, busses and rooms far north in the Flinders range at Arkaroola, 12hrs north of Adelaide, and finally a safari north from Arkaroola to the eclipse site with military planning and success and provided these services practically at cost. Bussing us along a road reserved usually for the gas pipeline company we traveled 6 hours to the site along with a dozen support vehicles carrying food, water, bus repair equipment, beer, and tools for overcoming the environment etc etc, and at the site we found ourselves on a barren plain, well it only seemed barren until the owner of the 1.9 million acre area arrived with his family and workers and barbecue equipment and his beef to feed 200 people. It was amazing!! Oh yeah, we saw the eclipse too. The planning paid off. One bus suffered a punctured radiator which they repaired within an hour 400mi from the nearest garage, and one bus which stuck in sand and had to be dug out. We were in Adelaide before and after. You are pretty correct. Lots of people had no idea and no interest. many many were probably scared to death by the front page newspaper warnings of blindness. Even one member of the Adelaide SA astronomical society said it was not worth the trip for "only 30 seconds" (Tony Beresford, but maybe he was afraid to show up and face some of the US observers (especially me) who were anxious to "discuss" with him his hobby of publishing classified orbital elements of US surveillance satellites for the use of Osama Bin laden and his friends.) Dale

From: Fraser Farrell

We didn't see any shadow bands, and there were at least a dozen of us watching the side of the bus and our marquee for them. Probably because the wind homogenised the air too much?

My sister, who has never shown any previous interest in astronomy, phoned me yesterday to describe what the eclipse was like from Lake Everard. I think she's planning a trip to Antarctica next November...even if she has to hijack a plane or stowaway on an icebreaker. Ahh, the enthusiasm of the freshly converted umbraphile... :-) cheers,

From: klipsi@bluewin.ch

>Ahh, the enthusiasm of the freshly converted umbraphile... :-)

yessss ! of all impressions related to a total eclipse, I think the reactions of "new followers" are most rewarding, and often quite fun.

e.g., last eclipse , a few days ago. A swiss tourist I met in Australia. He is touring Australia for 3 months, and he heard about the eclipse in the media. As he was in South Australia he thought, well, let's go see it. But he wasn't sure if he was going to like it. I mean, less than 30 seconds ??? He asks me: Olivier, you came all the way here just for the eclipse ? I say: yes. he asks: just for 30 seconds ??? I say : yes. he says: you're crazy ! I say, with a forgiving smile: just wait and see... .. minutes after the eclipse, he says: "oops ! Now I am crazy, too !" ;-)

>> on the morning of Dec. 4 I heard Jay Pasachoff , interviewed on ABC radio, great quote he said in a straightforward way: "... you HAVE to see this HERE (= inside path of totality) . Watching it on TV or the Internet is nothing, you might aswell stay in bed !" Great line, Jay, I loved it ;-)<<

and about the very short duration of totality in Australia: a german eclipse chaser who watched the eclipse next to me, said, when I asked him how he liked it: "Better than sex, but much shorter !" Klipsi

From: Robert B Slobins

Fraser: I just saw your image on Spaceweather. Good work!

Questions: Is there more foreground to the image? If this is a film image, do you have access to a color darkroom or custom lab. You can get much more information out of that corona by burning in the inner corona by hand. Alternatively, find a Nikon Coolscan 4000 scanner and have the image scanned by an expert at very high resolution into a TIFF. This scanner has the high dynamic range to do this. You may also want to spend the money for a drum scan as an alternative. Regards, Robert

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B Slobins

From: Fraser Farrell

Robert, I'm planning to scan the negatives themselves at very high resolution - as soon as I can borrow a scanner with negative/slides scanning capability. Seeing as one of my customers is a camera shop, and another does ID & security cards, I don't expect this will be long delayed.

Meanwhile, to silence the clamour of people asking _me_ "what did you see?", I present these low resolution versions of my scanned prints.... cheers,

From: Robert B Slobins

Fraser: So if you have a clamour of people asking you what you saw, you can make customers of them. ; -) --rbs

First pictures

From: K. Wiersema To: SOLARECLIPSES@AULA.COM Date: Fri, 13 Dec 2002 19:08:27

Hello people We put a few of our eclipse pictures on <http://zon.wins.uva.nl/~wltvrede/personal/vacation/afrika2002/eclipse/index.html> It was a pleasant surprise that in spite of the technical problems with my camera (jammed shutter) during totality (talking about bad timing....) about 15 slides came out OK, especially 5 Bailey Beads pictures. I must emphasize that the pictures on the internet don't look as good as the original slides. That is because of our crappy slide-scanner and our complete lack of slide-scanning-skills. We will put some more pictures online during next week. A composite we made of last year's slides (the 2001 eclipse) can be found at: <http://zon.wins.uva.nl/~wltvrede/personal/vacation/afrika2001/eclips/9.html> Greetings, Klaas Wiersema Patrick Weltevrede



Meeting in London Heathrow:

Ellen Bruijns travelling to Australia; Joanne Poitevin travelling to South Africa. Both the same objective:

The Total Solar Eclipse of 4 December 2002! Picture by PP

Eclipse Cruises

From: Gerard M Foley To: SOLARECLIPSES@AULA.COM Date: Thu, 12 Dec 2002 21:48:29

At least two cruise ships were off the African coast in the Indian Ocean on 4 December 2002 attempting to allow passengers to see the TSE. After totality, aboard one of them, those responsible for advising the ship's officers where to position the ship said that the meteorological information available the evening and morning before eclipse did not indicate that any particular accessible part of the eclipse track was any more likely to have good visibility than any other. The decision was made to go to the accessible place of longest duration of totality. That location proved to be completely cloud covered at the time of totality and for almost all of the eclipse.

It is possible that the itinerary of the two ships had been determined long before, so that they could not both reach what would be, close to the time of eclipse, judged to be a favorable position. Also one of the ships may have had better meteorological data than the other. have made better use of what was available, or just been lucky. Gerry <http://home.columbus.rr.com/gfoley>



Eclipse epidemic in Musina Picture by Patrick Poitevin



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Beauty Eclipse

From: rybrks1@cs.com To: SOLARECLIPSES@AULA.COM Date: Wed, 11 Dec 2002 11:47:45

Perhaps the prettiest TSE I have seen (out of only 8)

Moon was so close to the size of sun that it was nearly a circle of Chromosphere. Very colorful.

CAVU skies. Ceiling and Visiblity Unlimited for you non-pilots. No green flash from Stuart Hiway Ray Brooks

From: Jay.M.Pasachoff@williams.edu

I am struck by Ray Brooks's comment "Moon was so close to the size of sun that it was nearly a circle of Chromosphere. Very colorful," and earlier comments about people scorning a 30-s eclipse, and have the following thought:

An explosion takes place in a tiny fraction of a second, but is still remarkable because it is an abrupt change.

An eclipse of any length as the two diamond rings/chromosphere, and for tourists the length of the eclipse in between is really secondary to the fact of the eclipse.

So somehow in the future, in discussions we should be minimizing the length of the eclipse and citing the exciting second and third contacts. In fact, following Ray's comments, we could even make the case that the shorter the totality, the more exciting. Jay Pasachoff

From: KidinVS@aol.com

> . In fact, following Ray's comments, we could even make the case that the shorter the totality, the more exciting.

Now.... THAT would be a stretch!!!!!!!!!!!!!! Rick Brown #8, and looking forward to the LONGER ones down the road!!!!

From: klipsi@bluewin.ch

this sounds very promising for the 2005 hybrid in the Pacific. ;-) Klipsi

From: Robert B Slobins

I second Jay's remarks. I was with the RASC Calgary expedition in 1995. We had to be the first group to see totality--41 seconds--maybe--in the Thar desert.

I was watching totality through the third contact flash spectrum camera: essentially a medium telephoto lens with diffraction grating in front. The flash spectrum was no flash--the chromospheric spectrum rotated around the lunar limb.

My coronal images show the chromosphere along the lunar limb as well. What is interesting about them is that there is a very bright line of white inner coronal light above the chromosphere, probably not as thick as the chromosphere. (I guess that there is where the heavy-duty action occurs where the corona gets to 4 million degrees.)

Lesson learned: All eclipses have value. The 2005 and 2013 annular-totals are worth going for simply because we can see just about down to the 'surface'. We could measure events occurring at the sun's poles and compare the results obtained from lower latitudes. All we need to do is to prepare our programs accordingly. cheers/rbs

From: Robert B Slobins S

this sounds very promising for the 2005 hybrid in the Pacific. ;-)

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Klipsi In 2003 and 2005, we will have to deal with unstable platforms like aircraft and ships. How do we get to produce usable results: images, measurements, spectra, under such conditions? Most of us have been landlubbers on eclipse expeditions. --rbs

From: Joel Moskowitz

Just back yesterday from Australia. We (myself, Glenn Schneider, Craig Small, Michael Gill, Jay Friedland, Joe Cali, Bengt Alfredson) were at a site not too far from Cameron Corner on a farm (1700 square miles in size). We had clear skies with an 360 degree astronomical horizon Mid totality was 1.5 degrees above the horizon. Due to extinction, we saw about 1/2 solar radius of corona, but it was really quite red. Chromosphere all around with many prominences. Second and third contact diamond rings actually consisted of 3-4 simultaneous Baileys' beads. We also saw a green flash on the setting horn of the crescent sun. Really beautiful, but too short!

On a side bar, security at the Melbourne airport was absolute in not doing ANY hand checks of film. Glenn had brought data sheets from Kodak, but the security people were not interested. Glenn found a representative from Qantas who OK'ed the hand check of our film. This took about 45 minutes. While I was waiting at security, I watched many eclipse chasers go through security being forced to xray their film, all being refused hand checks and being told that the machines were "safe up to ISO 3000"! However they still would not hand check Glenn's T-Max 3200! I think the discussions recently about going digital may be appropriate for this problem Either that, or buy your film at the destination and have it processed before coming home. I also had a discussion with one of the security guards, who stated that they no longer were hand wandng people except if you had a doctor's letter stating that you had a metal implant. If you set off the metal detector, you had to take off your belt and send it through the xray. I hate to think if someone were wearing metal buttons on their pants, as they would have to take them off and send them through the Xray. IN ADDITION, at the gate, EVERYONE had a hand search of their carryons and everyone was wanded (by QANTAS security). Joel M. Moskowitz, M.D. 8 (total)solar eclipses and counting

From: Dale Ireland

Joel This was pretty much our own experience. We were on land of similar size about 70mi west of Cameron Corner. Did you get a GPS fix for your site? How did you get to your viewing site? We were at 29 36m 22s S 139 37m 41s E As I mentioned before I had the same impression that the corona was subdued and reddened due to the low elevation. It has always looked slightly blue to me but appeared magenta this time at less than 2 degrees above the horizon. BTW, although near the center of Australia we were barely 100ft above sea level. I can't fault the airport security, they had bigger concerns than the film of some eclipse goes no matter how important it may seem to us. They had some obviously improvised security methods set up at Melbourne in response to a perceived increase in threat. The whole boarding gate area had the seats arranged like a rat maze to funnel everyone through the improvised security tables where everything you had was dumped out. I felt it was all for my benefit and could see no point in distracting the overwhelmed agents by arguing the details of film speed and aviation law. We found a professional photo lab in Adelaide (not a one hour place) to have all our groups film processed before going to the airports, thus avoiding all the headaches. On the way in I had some film in x-ray proof bags and they never seemed to care when it went through the machine. Qantas was a bunch of idiots anyway, they changed some of our connections without informing us in advance and then after the wands and hand searches and anal probes they gave everyone real 5 inch steel steak knives for the dinner meal, go figure that one. Dale

From: Glenn Schneider

Couldn't resist replying before going to bed as I make my way through 10 days of accumulated emails. First - Congratulations to Jay, Ray, and all)for their successes. To echo Jay's comment on duration, I still praise the Oct 1986 eclipse as perhaps my "favorite" eclipse - though it was so fleetingly ephemeral its definition still eludes us.

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_86/E1986_MOSAIC.html if any hadn't seen it yet. G'nite, Glenn Schneider

From: Glenn Schneider

Hi Joel, When you can do send me the rest of the digital images. No hurrray at all as I am going into HST/work mode as of tom-

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morow. Perhaps easiest way is CD ROM?

A quick note. I was looking through your images on the flight back to Tucson, and noticed ALL of them have a slightly afocal image of what looks like a "J" shaped piece of hair/dust close to the right edge of the frame near the top. Not a complaint - but thought you should know if you hadn't noticed. May be something sitting on a window just above the CCD? Cheers, -GS-

From: Glenn Schneider

Joel was at the same site as me: Lat=-29 07 53, Long = 140 53 50 We went overland in a 4WD campervan: Canberra->Tibooburra->Camerons Corner->Lindon Station

Melborne security was intractable w.r.t. film. However, I found the QANTAS folks VERY helpful. I left our films with Joel at the security checkpoint, then going through without them to the the "rat maze" I found the QANTAS duty manager (not the security people there who had other work to do). He walked back to the general security checkpoint with me and authorized the passage of the film without X-ray subject to hand check. Without QANTAS intervention (and help) we would have been left in the lurch. The 5-inch metal knives and forks were a bit of a surprise, I must admit - particularly when the security guy had first told me that someone could hide a bullet in a film canister (though I'm not sure what good (or should I say bad) a bullet does without a gun). The note in the silverware pack which explained that these utensils were within security compliance was the real shocker. This convinces me though, for future eclipses, to leave an extra day on the back end to process film at a local pro lab (or bring your own C-41 / E6 chemistry along!). Glenn Schneider -GS-

From: Crocker, Tony (FSA)

So let's get some cruise ships deployed for 2005.

From: Joel Moskowitz

> Joel this was pretty much our own experience. We were on land of similar size .../...

We were at Linden Station: 29 07m 53s S 140 53m 50s E We got there by Campervan, actually a 4wd truck.

> Qantas was a bunch of idiots anyway, .../...

Along with a card stating how the stainless knife met QANTAS security needs! Joel M. Moskowitz, M.D. 8 (total)solar eclipses and counting

From: Joel Moskowitz

I already burned the CD. I also noticed the the "J" image today and went back to the camera, and, sure enough, there was a small piece of dust on the CCD. Now (too late) cleaned. Joel M. Moskowitz, M.D. 8 (total)solar eclipses and counting

> went back to the camera, and, sure enough, there was a small piece of dust on the CCD. Now (too late) cleaned.

Well, that's what the Photoshop "clone relative" tool is for... -GS-



Camping in South Africa. Joanne Poitevin here with "Braai" and our tent in Ben Lavin Camp, South Africa (picture by PP)

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Timing observation request from David Dunham

From: Vic & Jen Winter - ICSTARS Astronomy To: SOLARECLIPSES@AULA.COM Date: Fri, 13 Dec 2002

>> From: David Dunham <dunham@erols.com> Subject: Observations near the limits of the Dec. 4th eclipse

This is a request as well as a report.

The International Occultation Timing Association is interested in analyzing all timed observations of 2nd and 3rd contact, and of Bailey's bead events, made from locations measured with GPS receivers, during the total solar eclipse on December 4th. Especially sought are video recordings showing Bailey's beads. Although observations near the limits are currently the most valuable, we are interested in knowing about timed observations from a variety of locations across the path of totality, even near the central line. While driving from the south limit to the north limit along the Stuart Highway in the Outback of South Australia west of Woomera, we passed a few hundred observers set up at scores of locations across the eclipse path, many with quite sophisticated equipment, starting only a couple of kilometers north of the southern limit, and having a good distribution across the path, not just concentrated near the center. For now, do not send us your video tapes, but do send me a message with your observing location and a description of your observations, and the equipment that you used to observe the eclipse; we will later decide which observations are most valuable for analysis and then ask for further information, including, when appropriate, copies of video tapes.

Here is a list of reports from locations near the limits of the eclipse that I know about, with some of the messages copied below; the positions were measured with GPS receivers, and timings were made either with the STVastro system or with WWVH time signals that were received clearly: Northern Limit: David and William Dunham near Coondambo near the Stuart Highway in South Australia Southern Limit: Hans-Joachim Bode in Botswana Roger Venable near the Stuart Highway in South Australia David Herald and Joan Dunham near Wirraminna, west of Lake Hart near the Stuart Highway in South Australia Phil Schupp with the Eclipse Edge expedition, led by Tom Van Flandern, near Leigh Creek, South Australia, and also Ron Abileah near the same location

Northern Limit: As far as I know, only my son William and I timed the eclipse from a location near the northern limit. William zoomed in on the Sun with a camcorder, giving a low-resolution view that showed few beads but recorded both contacts, showing that we had only 5 seconds of totality. We were only a little south of Fred Espenak's inner edge of the northern "graze" zone, but were about 1.5 km south of it, according to David Herald's calculations. I videotaped the eclipse with a Supercircuits PC35C camera attached to a 4-inch Schmidt-Cass. telescope that gave only about a 10' wide field of view. I was able to record many dozen bead events with this high-resolution view up to 2nd contact, but missed 3rd contact, getting onto the already large expanding crescent about 5 seconds later where I recorded just a couple of bead events near the north end of the crescent, then several more near the rapidly growing south end. The sky was perfectly clear, and the earlier strong wind diminished considerably around totality.

Southern Limit: Hans-Joachim Bode from Hannover, Germany, sent the following account: Hallo David, I just returned from Botswana (9.12. 11h30 UT), where I succeeded under excellent conditions to record the eclipse at the southern limit: I hope Konrad Guhl "did" the same at the northern edge. Best wishes Hans Unfortunately, Konrad Guhl (from Berlin) wrote saying that he was clouded out at the n. limit, as were Richard Nugent and Paul Maley (both from Houston, TX) near the s. limit in, I believe, Mozambique.

Perhaps the best record of Bailey's beads during this eclipse was obtained by Roger Venable, who wrote: Imagine a semiquaver and a scooped-flat middle C: I got beads, You got beads, All God's chil'un got beads. . . I had planned to go to Ceduna, on the coast of South Australia, but the weather forecast was better for northeast of there, in the Outback. My bags were lost by United Airlines, so while I waited in Adelaide for them to catch up with me (36 hours), my Ceduna plans fell through. After getting my bags, I dashed up to Woomera and had a great video view of Bailey's beads from the middle of the southern graze path [this was slightly outside the complete totality zone, so he had some beads even at central eclipse; the location was near the Stuart Highway]. The setting of the crescent sun was cool, too. Most of the weather along the graze paths in Australia was good, and in Ceduna the clouds parted just before totality. Thousands of eclipse chasers had gathered at the midline, 5 to 10 kilometers west of me, and at the onset of totality, I could hear the roar of the crowd! Interestingly, I observed someone else only a kilometer NE of me at the southern edge, driving a square-lined white SUV. He or she appeared to be observing the eclipse -- was it anyone on [the IOTA occultation] list, perhaps? -- Roger Venable (back in Georgia, again without his bags!) Later, Roger described his

(Continued on page 42)

setup that was so successful: I used four, count 'em, four Maksutov telescopes on a single German equatorial mounting. The scopes were of the Astele brand, made in Russia and currently advertised in astronomy magazines. Each is of 70mm aperture, and each had a PC23 videocamera attached. The scopes are approx f/13, and the long dimension of the field of view on the video is about 15 arcminutes. I oriented the long dimension of the video chips east-west. I carefully followed the bead disappearances during the eclipse so as to include all disappearances at second contact before I moved the pointing in RA in order to include new beads at third contact. I combined the signals into a single composite video signal by the use of a quad recorder interposed between the cameras and the VCR. This divides the TV screen into four images. I did digital time insertion with the Garmin GPS-16 and STV-Astro combination, interposed between the quad recorder and the VCR. There may be slight time delays in these connections, and I'll figure all that out in due time, perhaps with the help of some of the experts on this list. (I intend to incorporate a second STV-Astro into the setup, to measure the delays.) The quad recorder updates only one videocamera's image every 60th of a second, so the time resolution for each camera is a 15th of a second. Everything operates on 12-volt DC, and I ran it all with a branching power cord from the cigarette lighter of the rental car, with the engine running. One of the telescopes had a ND-5 solar filter (Baader Astrosolar) and no color filter. This is the standard way to videotape the eclipse, nothing special. That image was overexposed if the autogain was left off, but with autogain on it made a very nice picture. The other three images were with ND-3.5 solar filters (also Baader Astrosolar) and narrow band color filters. Each of these has a FWHM of about 10 nm and excludes IR to at least 1200 nm (current videocameras are insensitive to IR beyond about 1100 nm), centered respectively on 500, 550, and 600 nm. These images were ideally exposed with the autogain off. Because of the different autogain settings, the three color-filtered views can be compared to one another but they cannot be directly compared to the integrated light view. Now, why did I do all that? (1) I wanted to see how the beads' disappearance is related to color. This relates not only to limb darkening, which is not color neutral, but also to the depth of the photosphere. (2) I wanted to see whether integrated light video timings of beads are really chromospheric "beads" due to the IR sensitivity of videocameras, and as such are not valid for the measurement of the sun's photospheric diameter. (3) I wanted to see if the thin line of the sun, believed to be chromosphere, seen in integrated light after the disappearance of the beads at second contact and before their reappearance at third contact, could be seen differently in different colors. This relates to the possibility of Mie scattering from levitated lunar dust. (4) I wanted to star gaze from the Outback. To this aim, jet lag is an advantage! I removed the videotape from the VCR before packing for home, fearing that if the VCR were damaged in transit I'd have a bad time getting the videotape out of it. So, the tape went with me in carry-on luggage. My other bag, containing most of the equipment, made it home with me, so I haven't really lost much. I'm no jet-setter. Experience will make me a better traveller. I learned lots of little lessons about air travel. -- Roger Venable

David Herald, from near Canberra, Australia, used a Sony camcorder with a 3x lens and solar filter, all on a sturdy tripod, to obtain a view of the whole Sun that just filled the field of view. With this, he obtained a virtually complete record of several dozen bead events. The location was a little more than a kilometer north of the inner edge of Espenak's southern graze zone and totality lasted 13 seconds. Joan Dunham observed nearby with a filtered 90-mm telescope and Supercircuits PC33C camera that gave an approximately 15' field of view. The tripod proved to be inadequate at the low altitude with the wind coming virtually from the direction of the Sun, but she managed to record many beads up to 2nd contact with this relatively high-resolution system. After the eclipse, they drove southeast to Pimba near Woomera and passed an observer 2 to 3 km south of them with a rather elaborate set-up; that was probably Roger Venable! William and I rejoined them at the Pimba roadhouse almost 2 hours after the eclipse.

Tom Van Flandern wrote about observations by members of his Eclipse Edge expedition near Leigh Creek, South Australia: One of our group, Phil Schupp, took a video recording at our site. He is planning on making it available. One of the center-liners was going to make his video available too (for comparison). I met Ron Abileah there. Hopefully, my full report will be available in a few days or so. -[Tom]-

Ron Abileah wrote: We had a beautiful eclipse view near Lyndhurst. Clear from horizon to horizon. Turns out we were situated 100 m from TVF's [Eclipse Edge Expedition] bus. Actually, I had initially picked another site but it turned out to be inaccessible, so settled on option 2. Tom's bus showed up about an hour after we had settled in. Introduced myself to Tom after the eclipse. First time we saw each other in exactly 30 years. I was not surprised to see the Tom party bus show up. It was more interesting that there were 4-5 other small parties in area of S limit. One party 100 m S of us (more daring than we!). Another party 1/2 Km N of us (chickens!). Didn't get a chance to talk to them but they appeared to be there purposely. SO it must be that the word on edge viewing is getting around.

David

SE2002 and NASA's IMAGE-FUV

From: Fred Espenak To: SOLARECLIPSES@AULA.COM Date: Fri, 13 Dec 2002 19:38:20

TSE2002 and NASA's IMAGE-FUV NASA's IMAGE-FUV (Far Ultraviolet Imager) was able to observe a good part of the solar eclipse on December 4, 2002. You can link to an overview of raw data and a movie of WIC-observations or movie of SI-13-observations.

The web site is: <http://sprg.ssl.berkeley.edu/image/> - Fred Espenak

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2**Olympic Coutness Eclipse Cruise 2002**

From: Gerard M Foley To: SOLARECLIPSES@AULA.COM Date: Mon, 09 Dec 2002 21:37:59

My grandson Karl Baker and I returned to the USA yesterday from his first and my ninth (since 1932) travel to the path of a TSE.

We had two brief glimpses through cloud of the early partial phases of the eclipse. Then the cloud became very dense. Just before maximum eclipse two fairly large birds, seemingly of the same species, flew from the west, paused in front of the bow of the ship, and then continued their flight eastward away from the rapidly approaching shadow of the moon. We could not see the sun at maximum eclipse.

Olympic Countess was about S27d30.330440 E037d39.482 around 06:36:30 UTC at maximum eclipse. Gerry

From: Gerard M Foley

The position should be S27deg 30.440min E037deg 39.402min. GMF

From: Shivapuja@aol.com

as i was also there, i concur that during totality the sun was not visible. or, to put it another way, it was eclipsed! michael e walton

Eclipse Pics from Zimbabwe posted

From: Bill Kramer To: Solar Eclipse Group <SOLARECLIPSES@AULA.COM> Date: Fri, 13 Dec 2002 21:38:54

Pictures from Zimbabwe posted at: <http://www.eclipse-chasers.com/e02/ec12002.htm>

More to come... more submissions welcomed! Clear sky! Bill Kramer webmaster@eclipse-chasers.com

Eclipse 4 Dec

From: Dale Ireland Cc: Solar Eclipse List <SOLARECLIPSES@AULA.COM> Date: Fri, 13 Dec 2002 23:03:50

Hello has anyone seen a weather satellite (GMS or other) movie of the eclipse? If so could you direct me to it please. The Far Ultraviolet movie at http://sprg.ssl.berkeley.edu/image/wic_summary/a_highlights/dec_04_2002/wic_eclipse_dec_2002.gif is pretty cool Dale

From: Michael Gill

Dale, Check out the animated GIF on the EUMETSAT web site: http://www.eumetsat.de/en/index.html?area=left5.html&body=/en/area5/special/eclipse_04122002_animation.html&a=500&b=0&c=0&d=0&e=0 (2.4Mb in size) Michael Gill

Slides

From: klipsi@bluewin.ch o: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 04:21:11

just received my slides... one great wide angle shot, with 20mm lens, shows wonderfully the shadow, even better than on video. Will have to make duplicates, as it is a unique slide, and find a scanner.

other shot of eclipse: at 3rd contact I shot and shot and shot with 200mm lens, handheld, at 1/500 sec. exposures, bracketting (you can hear the sound in one of my videos). Sun image is small, but what a huge amount of red ! lots , LOTS, of chromosphere !!! will definately have to scan those. Klipsi

Brief eclipse report

From: Geoff To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 01:23:13

Hi there everyone, I only just got back yesterday from my 2 week long trip around Australia - here is a brief report for those interested:

Our group consisted of around 10 people, half of which were astrophysics undergraduates/graduates/PhD students, the others being partners and friends. We left from Sydney and drove directly to Ceduna, stopping off at Parkes (NSW) (home to "The Dish", the large radio telescope). We then had an incredible exciting trip through the Hay plains, seeing nothing but flatness! Stopped off at Hay (NSW) that night, Port Pirie (SA) the next night, then got to Ceduna on the 2nd.

It was SUCH a relief to get there, knowing we were under the path of Totality. We spend the next days enjoying the festivities and searching for a viewing spot. It was such a good feeling in the main streets.. so many people from all over the world.. it was incredible. We chose Nailor street at Thevenard for our viewing location - having watched the Sun set there on the 2nd, it was a perfect viewing location - nothing but water and a low headland in front of us. We had also noticed that on the 2nd and 3rd of December, the days started off cloudy but then cleared up by the few hours before Sunset.

On the day of the eclipse, I was VERY pesimistic about it - I didn't think there was a chance we would see it, but as you all know, we did. A perfect gap in the clouds allowed all of our group to see their first Total solar eclipse. Just incredible... Unfortunately we could not watch the sun set though, heavy clouds obscured the horizon about 15 mins after totality, so we packed up and watched the fireworks :)

On our trip back we travelled along the whole coast of SA, VIC, and NSW back to our home in Sydney. --Geoff

From: Geoff

Hi again, Here are some thoughts I have had, after witnessing the recent eclipse:

1. Totality felt so short... I cannot believe it was 30 seconds - it felt more like 5!
2. Despite all the advice eclipse veterans give, I can only now understand everything they say. After the totality was over, it was only then I realised that I had forgotten to look for the chromosphere, prominences, or Mercury! It just all happened so quickly..
3. Many things were learnt from this eclipse and many SIMPLE mistakes were made regarding photographic and video equipment. The eclipse was still "watched" by everyone (no one was concentrating too much they forgot to look), however I guess it was the fact that we didn't know what to expect, and that we had never seen an eclipse before, that made this happen.
4. It has long been known that lunar eclipse are leisurely events, lasting hours, whilst solar eclipses last just minutes. I think that after seeing a 30 second totality, even a 2-3 minute eclipse would seem leisurely! And a 6+ minute eclipse ... *2009* ... would seem extremely long... so long I can't even imagine what it would be like.

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I will hopefully have a few photos to show you guys when they get developed. Unfortunately the first partial phases weren't really shot due to stupidity on my side, totality shots should be OK, and again unfortunately no sunset eclipse shots (which I was really looking forward to), due to cloud factor. A multiple exposure sequence was shot, and to my knowledge was successful, but I won't know till its developed. The only prob with it is that the regular 5 minute intervals which the partial phases were meant to be shot at, won't be so regular, due to clouds obscuring the sun every few minutes. I had to improvise, and most shots were taken on time, however some are +/- 2 mins. --Geoff

From: Dribalz@aol.com

Having seen my first total solar eclipse, 7/11/1991, in La Paz Baja, California Sur under a perfectly clear sky, and despite it having lasted 6m27s at our location, I can tell you as I'm sure others who were there can, that it went by very fast. Time has a way of speeding up when you want it to go slow, and vice versa. Must be an Einsteinian thing.

See you in 2009! Andrew Hans

From: Geoff

Hi, Stupid me, we were not in "Nailor St" in Thevenard - that was a street we stayed at in some other town, it was just on my mind. Our viewing location was SLIPWAY ROAD in Thevenard, near the Fisheries. --Geoff

All videos on one page

From: klipsi@bluewin.ch To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 08:10:42

howdy friends, to make things simpler, I have linked all my videos of this trip , storm and eclipse, from one common page, <http://eclipse.span.ch/2k2tsevdo.htm> . REAL and MPEG a few more to come next week.

if you do have fast connection and watch the real video in large size, try to set your realplayer in fullscreen mode, it is quite nice despite some compression. Step back one step. Actually, if you take a hairdryer while watching the fullscreen ultrawide video and let it blow into your face, it gets quite realistic, as we had strong warm wind ;-)

another nice thing to do is to watch simultaneously realplayer for tele closeup and mpeg for wide angle, or viceversa. or better: fullscreen ultrawide angle realplay, with overlay closeup mpeg. Klipsi

Parently proud and mistakes kids can make

From: KCStarguy@aol.com To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 18:23:33

parently proud you should be Fraser. In 1999, I gave my minolta and telephoto to my 13 year old sun to shoot the eclipse while I concentrated on my video. When the pics came back, none came out as he was not steady enough. I also noticed that some other pic I took after the eclipse were a little grey-black blurred on some of the outdoor scenespics . I forgotten to tell him not to take pics before totally. Apparently he had and parts of the camera iris are possibly burned. arggghhhh!!!!!! Not parently proud but at least he saw the eclipse. Make sure to tell your kids (no matter how old), not to shoot the sun until totality. Dr.Eric Flescher (kcstarguy@aol.com)

>> I have just seen the pictures my 12 year old took on Dec 4, using an el cheapo pocket camera....and one of them is a great photo of our group about 5 minutes before totality. Complete with eerie yellow-orange lighting, long harsh shadows, and everyone looking expectantly sunwards. He even got a picture of totality. The print is totally black, with an orange-yellow ring ~2mm in diameter on it. May be able get more by scanning the negative. But I recall _my_ first TSE was over 2 minutes long and I totally forgot to take any pictures of it! Should I be jealous, or parentally proud? ;-) cheers, Fraser Farrell

>>

Picture by Joanne Poitevin



The Eclipse from Between Lyndhurst and Farina Station, South Australia

From: Sheridan Williams To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 14:05:51

Sent on behalf of Mike Foulkes:

The Eclipse from Between Lyndhurst and Farina Station, South Australia.

Hi Everyone. First of all if you have already received this message on the SEML - apologies. However I have had a few problems with my e-mail over the last few days and not sure if stuff is getting transmitted OK.

Paul Carter, Ann Davies, Derek Hatch, Val Stoneham and myself observed this year's total eclipse from just north of the centre line between Lyndhurst and Farina Station, Australia.

We had planned this trip and made flight and camper van reservations last year. As travelling in the outback has some risk, we also found the advice by Fraser Farrell and others on the SEML very useful in our planning. As Australia is a long way to travel from the UK, we decided to make the trip into a long holiday, initially visiting Perth and then Adelaide before travelling to the eclipse site. Both cities are great and we especially enjoyed the bottled delights of the Barossa valley.

It was in Adelaide that we first encountered the media coverage and official statements relating to the eclipse. This alas to say was almost identical to that given in the UK for the 1999 eclipse, which I'm sure is well known to everyone on the SEML, i.e. filters are dangerous and the only safe way is watch it on TV. The coverage even implied that viewing totality is dangerous. (Groan). We also saw the now infamous headline on the front of the Adelaide Advertiser of 'DON'T LOOK', which has already been described by Fraser Farrell, Dale Ireland and others in earlier SEML e-mails.

We picked up the two camper vans that we had booked last year on Sunday 1 December and started our drive northwards to Farina and the eclipse track. However our journey had an inauspicious start as our large 4WD broke down with a defective gear box just as we were leaving Adelaide. Although frustrating, in hindsight we were glad it happened in Adelaide rather than much further north. Fortunately, we managed to get another but smaller 4WD from our van hire place and then headed north only after a couple hours delay.

After several hours journey we decided to stop overnight in the small town of Quorn. With clear dark skies we were able to observe many of the delights of the southern sky.

After a good nights sleep, we awoke early on Monday morning only to find totally cloudy skies and rain showers. This, needless to say, gave us all a bit of concern for the weather on eclipse day. We then continued our journey to Farina station, observing some electrical storms over the Flinders mountains in the process. On the way we saw a number of people heading for the Lyndhurst Eclipse Festival. One or two of the vehicles (mainly VW vans) looked less than road-worthy and at one road house we saw a couple being pushed around the car park trying to get them started..

After eventually passing through Lyndhurst, we found that a public viewing area was being assembled in an area either side of the centre line on the road between Lyndhurst and Farina.

We finally arrived at the Farina campsite during late afternoon and eventually met up with other eclipse chasers from Australia, Germany, Holland and the USA coupled with people on camping holidays who were also keen to observe the eclipse. Some new facilities had been recently added at Farina and this turned out to be a very pleasant campsite.

Monday night was cloudy and very humid, again giving us concern for the weather on eclipse day. However after dark, we were treated to a spectacular electrical storm to the north and east of us for a few hours.

When we awoke on Tuesday morning, we found clear skies with a very strong but cooling breeze. The weather forecast indicated that conditions would be good on eclipse day - much to our relief. Ann, Paul and Val also visited Talc Alf, the local Lyndhurst character and rock carver, who by all accounts is a pretty amazing guy. Based on his local knowledge, he also thought that conditions would be good, which was very reassuring.

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By sunset, the wind had subsided considerably and we witnessed a very fine sunset. This was followed by a small star party with a few others on the campsite. The Zodiacal Light was easily visible and we observed many southern objects with a variety of binoculars, small telescopes and the good old Mk 1 eyeball. We also managed to take a few guided photographs and digital images of the Magellanic clouds and other objects such as Eta Carina.

After all the planning, travel and waiting, Eclipse Day finally arrived and we woke up to clear skies but again with a strong wind blowing. The weather reports indicated that the clear skies would remain but also indicated the potential for cloudy skies in Ceduna, where some of our friends had gone to observe the eclipse. Other friends had gone to Woomera but we were unable to find out anything about the conditions there.

We and many of our newly made friends moved to the centre line during mid afternoon. Prior to leaving, a vehicle pulled up at the campsite and a gentleman started to hand out safety leaflets on observing the eclipse. We also noted that the police and a first aid vehicle were regularly patrolling the campsite and the road between Farina and Lyndhurst.

After a short drive, we arrived near to the centre line and decided to observe from just off the road to the north of the 'official' public viewing area. Based on our GPS equipment, we were stationed at 30°10'40.6"S 138°19'8"E.

To the south of us were row after row of vehicles parked just off the road and all pointing westwards. This must have been an interesting sight from the helicopter that was flying around about above us before totality.

Although the sky was clear, there were two major problems, i.e. the strong wind and the desert dust.

When we moved out of the vehicles into the open, we all felt as if we were being grit-blasted. Periodically small dust clouds would obscure the distant low hills or the more distant vehicles in a brown haze or sometimes envelop our own vehicles. We were very concerned that the wind buffeting would preclude long exposures of the corona (if visible) or even shorter exposures. Further we were concerned that the dust could get into the cameras, lenses and telescopes and onto our Mylar filters and so these were initially left in the vehicles. However the nightmare scenario for the day was being hit by a little dust cloud during totality.

Fortunately, and very much to the relief of us all, the wind started to subside after the start of the partial phase and dropped considerably by totality.

Australian amateur, Roger Eton, had brought along an 80mm refractor which he used to project an image of the partially eclipsed sun and the sunspots. This was of great interest to everyone, especially the children present. Many also looked through our equipment.

We intended to do digital imaging of the eclipse with Nikon D100s (Derek, Paul and Mike) plus some more conventional photography (Ann, Val and Mike). We had a number of camera lenses including 500mm F8 lenses plus an altazimuthly mounted Orion OMC 140mm F15 Makstutov and a equatorially mounted Televue pronto (70mm aperture).

As totality approached we all became very excited but others adopted a more Aussie approach by remaining relaxed and just taking in the atmosphere, holding onto a 'cool one'.

The disappearance of the final sliver of photosphere seemed to take an age but it finally resulted in a wonderful diamond ring. No shadow bands were detected, although to be honest none of us really looked for them. As the sun disappeared, a symmetric corona flashed into view. This was typical of one at solar maximum. Through the camera view finders some coronal plume structure was detected. The chromosphere was also present throughout totality.

There were a few small prominences but no really large ones. A large group was visible to the south of the second contact point as seen from our site. Possibly the largest prominence visible was to the south of the third contact point.

No one visually detected Mercury or Antares.

Although no shadow was detected at 2nd contact, it appeared towards the end of totality as a narrow band extending from the horizon to the zenith, much as already reported on the SEML by Chris Malaki and Joseph Cali. Near the eclipsed sun, the shadow edges curved and narrowed below the sun towards the horizon but higher up the edges were more parallel. This was

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much narrower than Derek and myself (with Sheridan Williams, Ann Callow and Fran Donovan) saw in Madagascar last year. Joseph Cali's description of this narrow shadow as 'God's Bowling Alley' is probably rather apt. Peter and Susan, some of our Aussie neighbours at the camp site, managed to capture this on a small digital camera and we hope to get a copy of this image at some time in the future.

Third contact came all too quickly with another excellent diamond ring and we managed to see the shadow racing away to our NE. (again no shadow bands recorded).

We then waited to watch the sun set in partial eclipse. The northern horn set first. Then as the southern horn set, it reminded us all of a shark's fin on the horizon. I'm sure someone started to hum the theme from the film 'Jaws' at some point. No green flash was observed.

Needless to say after all of this, everyone was very very happy indeed. Many who were just interested spectators were amazed and commented that they now understood why people chase eclipses. Maybe this eclipse produced a few more converts.

After returning to Farina, we held a celebration party (It is amazing how many people can get into a camper van). Three Aussie guys who were going on a camping holiday along the Strzelecki Track managed turned up with a very large fruit cake to go with the beer, wine and nibbles. Where they got this from, I don't know.

We have still to process our films but the digital images have all come out better than we could expect, especially as we expected the seeing to be very variable given the low altitude of the eclipsed sun. Many images withstand enlargement to show structure in the prominences. The group near second contact shows a series of complete and incomplete loops. Some images immediately post third contact show a narrow sliver of photosphere overlaid by a very narrow chromosphere. We may have to wait until the film is processed to see if we recorded Mercury.

Derek has derived a duration of totality for our site of approximately 26 seconds based on his digital image timings (from the last appearance of a bead at second contact to the appearance of the first bead at third contact).

We are still sorting through our images and will try to post a few of them somewhere in the very near future.

Once again yet another great eclipse. A great time in Oz, especially due to the friendliness of everyone we met. And of course, viva Australian wine!!

(But we don't dare mention the cricket!!) Regards Mike Foulkes

Eclipse & Expedition photos

From: Francisco A. Rodriguez Ramirez To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 20:45:12

Hi all,
My eclipse photos from Shingwedzi Camp in <http://www.terra.es/personal8/cazaeclipses/ets2002>.



© 2002 Francisco A. Rodriguez

Clouded out in Kruger Park

From: Fred Espenak To: SOLARECLIPSES@AULA.COM Date: Fri, 13 Dec 2002 18:24:47

I've just returned from South Africa and am sorry to say that our group was clouded out. We had an observing site located about 7 km southwest of Shingwedzi Camp in Kruger National Park (South Africa).

The day before the eclipse had some scattered clouds and high cirrus in the late afternoon, but this dissolved away by sunset. During the early evening, I went out to the observing site to polar align my telescopes and the southern sky was stunningly clear. It remained that way throughout the night and was still perfect when I arose at 2:30 to complete my preparations for the eclipse. At approximately 3:30, I was setting up a remote camera and was sighting Venus through the viewfinder when it suddenly disappeared. Looking up, I could see clouds rapidly moving in from the east. Within a half hour, the sky became completely overcast.

I continued my equipment setup while keeping an eye on the sky. At about 5:30, it seemed like a clearing trend was developing but it only lasted for about a half an hour before it clouded over again. The partial phases were occasionally seen for a minute or two at a time through breaks in the cloud cover and we remained hopeful.

I had achieved an excellent polar alignment the previous night so the telescopes tracked the Sun with only a small drift in declination. This was quite important since the Sun was not seen for ten minutes or more between holes. I was confident that the tracking would keep the telescopes trained on the Sun should the clouds break during totality.

Our last view of the crescent Sun was perhaps 30-40 seconds before 2nd contact. I watched the sky rapidly grow dark and marveled at the warm colors toward the eastern horizon. About 15 seconds before 3rd contact, a few semi-transparent holes gave us a tantalizing glimpse of part of the corona, but it was very hazy and short-lived. Three seconds before 3rd contact, the chromosphere became visible through a hole and I was able to videotape Baily's beads before the emerging Sun vanished once again behind the clouds.

Very frustrating, by I tried to remain philosophical about it. What bothered me more was that all the South Africans who traveled to Kruger had missed their only opportunity to see totality until 2030 Nov 25. Most of them will not have another chance although I know that I will.

Nevertheless, we had a wonderful trip to South Africa and made some new friends who we hope will visit us in the US someday. Before returning home, Pat and I rewarded ourselves with a 5-night camping safari in Kruger. We have some unforgettable photos and memories of watching lions and cheetah from just 5 meters. - Fred Espenak

From: David Makepeace

Congratulations on your philosophical disposition in the face of such disappointment. You are very lucky to be able to chalk it up to experience and look forward to the next one. What is the clouded-out average for total eclipse chases? Is it 1 in 6 that elude us? If so - my time is running out. I have only seen 7 totals but they have all been under perfect conditions. Should I brace myself for the worst on the Kapitan Khlebnikov in November 2003?!! David Makepeace Toronto, Canada UmbraLog 1281

From: F.Podmore

Fred, I'm so sorry you had a miss - someone commented that they were sure you would have had a backup plan, to jump into a vehicle and head for a 'hole'.....

How about compensating by sharing some of your wildlife photos with us - you probably saw things we didn't (-:)) Francis

Who was in all those planes over Messina?

From: Daniel Fischer To: SOLARECLIPSES@AULA.COM Date: Sat, 14 Dec 2002 21:09:53

Shortly before (and after) totality we noted several heavily curved con trails near the eclipsed Sun over Musina/Messina, South Africa; you can see two of them in the wide angle view in www.astro.uni-bonn.de/~dfischer/skyreports/rsa2002 and on www.astro.uni-bonn.de/~dfischer/skyreports/rsa2002

astro.uni-bonn.de/~dfischer/skyreports/rsa2002/karrer.jpg .

I don't recall any offers for commercial viewing flights for this eclipse in the astronomy magazines or in South African papers - does anyone know what was going on here? During totality over Bulgaria in 1999 I heard a distinctive sonic boom from a chasing aircraft, but I've never seen curvy con trails next to an eclipsed Sun ... Daniel P.S.: Good photographs taken at the non-Baobab site of our expedition, incl. a fisheye shot, can be found at homepage.ruhr-uni-bochum.de/Bernd.A.Brinkmann



The sky at Singelele Camp, Messina after totality with a plane track and Venus (marked). Picture by PP

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Eclipse thoughts

From: Mike Murphy To: SOLARECLIPSES@AULA.COM Date: Sun, 15 Dec 2002 17:12:41

On 14 Dec 02, at 12:33, Geoff wrote: even a 2-3 minute eclipse would seem leisurely! It doesn't, Geoff; even the three minutes last year in Zambia seemed to be over so very quickly. It seems quite a time if you sit and look at your stop watch but the eclipse itself probably affects time in some astronomical way ;-) - Mike starting his planning for the 2003 annular

From: Robert B Slobins

Three minutes is three minutes. Your experience of it is another matter. It is the average length of time of a song. Figure skaters have about that much time to win the Olympic gold medal. Football games can change drastically in less time than most totalities. How many of you would peacefully tolerate a three minute delay in traffic, when you are stuck or hardly moving in a traffic jam?

Three minutes is plenty of time, provided one organises it well. cheers/rbs

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2**Eclipse report and links**

Dear All, Please find herewith (see earlier in this SENL) our TSE 2002 report from Singelele Camp, Mussina South Africa with pictures, measurements, time scale, coordinates and instruments:

http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/20021204.html

The link to all other TSE 2002 reports is at:

http://solareclipsewebpages.users.btopenworld.com/SECalendar_files/TSE20021204Links.html

And last but not least, please check our Solar Eclipse WebPages for all our solar eclipse activities, including the coming conference Totality Day on 8 February 2003:

<http://solareclipsewebpages.users.btopenworld.com>

Best regards, Patrick and Joanne



Groups photo at Singelele Camp, Musina taken by Monique Deleu

Success from Kezi, Zimbabwe

From: Peter Tiedt To: Solar Eclipse Mailing List <SOLARECLIPSES@AULA.COM> Date: Tue, 10 Dec 2002

Hi all Just back from Kezi, Zimbabwe for the eclipse, and Kruger Park (for chilling out) , where I hooked up with Fred, Jay Anderson, Kelly Beattie (S&T) and Bob Yen.

79 seconds of utter beauty witnessed in crystal clear blue sky from the top of a granite outcrop about 8 km south of Kezi (about 100km south of Bulawayo)

Very light eclipse, 4-starred corona, and prominences (2) at 12 o' clock and 6 o' clock.

Managed an auto sequence of 28 during totality, and a few diamond rings through a 114mm reflector.

Now want to see the results when the films get back.

When film back, will post on Africlipse website. Peter Tiedt

From: Evan Zucker

That's exactly why Fred Espenak literally ropes off an area around his equipment to keep everybody away. Not very friendly, but it does help ensure that nobody interferes with his photography and observations. -- EVAN

From: Robert B Slobins

Peter: After all of your good work, you deserved better than to have some moron mess you up. I am sorry this happened, especially after last year.

We have all had our disasters at these events. Perhaps we ought to start up a discussion on what happened and how to avoid them in the future. Then "someone" can compile them and write a book on how to raise the chances of having a successful eclipse expedition.

We seem to be good at avoiding clouds. Now we need to reduce the chances of "clouding out" ourselves.

We do not have a streak of good and accessible eclipses over the next decade or so as we have had since 1988. Therefore we cannot afford to mess up; there is not necessarily a "next year".

Any takers? It is worth a presentation or workshop at the next eclipse chasers meeting. --Robert B Slobins

From: Bill Kramer

Clouds are easy to avoid compared to clods!

It is always wise to be mindful of your neighbors and brief them about what you are doing ahead of time, but sometimes that cannot be avoided such as on cruise ships. Then I recommend a protective barrier or careful set up positioning surrounded by other cameras.

From: Vic & Jen Winter - ICSTARS Astronomy

I still remember all the planning done in Turkey '99 to keep people from bothering Fred's equipment. Not only did Fred have his police tape surrounding his site, but many of us flanked him all around to prevent this sort of problem. We joked, "who would be responsible for submarine duty for protection off of Lake Hazar."

.... only to have a hapless young girl emerge from the lake with floatie-raft under arm smack-dab in Fred's area. Didn't she ask directions to the bathroom?

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One guy in our group this year reports that some moron bumped his tripod leg and promptly gave a description for the APB which accurately described himself. Clear Skies, Jen (I guess this eclipse was just "shy". It just didn't like pictures taken of it, that's all.)

From: Peter Tiedt

There will not be any images from Kezi. (well maybe one or two).

I centred the sun in the viewfinder just before totality, and set the automatic sequence (using Eric Pauer's program and circuitry).

After totality began, I noticed someone standing fairly close to my tripod, and thought nothing of it.

When I got my negatives back today, the first two images are centred, (the second one shows signs of shake with multiple images) and then the balance have the sun right on the edge of the frame, with all the left side corona detail cropped by the frame-edge.

AAARRRRGGGHHH! I could kill!

Eric - your program worked perfectly. Exposures are exactly what I expected. I will use it again. Peter Tiedt

From: KCStarguy@aol.com

So a person was standing in front of your camera?

15-39 Minutes before the shadow moved in on us in Hungary in 1999, I made sure no one stood in front of my video-camera. I warned several people to move and was not bashful about it.

I also warned my group that I was leading that there should be little walking around which might upset tripods etc.

For the Not quite eclipse calamity reports- During 2001, one of the van drivers started asking me questions during totality and broke my concentration for a few precious seconds. But I was able to video the whole ring of fire 360 degrees and more despite trouble with my other cam. Dr.Eric

From: B0802Alex@aol.com

Yes, that's what I call the necessary security distance while the eclipse is in progress. But this year, it was my 3rd eclipse but I had no success. Standing with 12 other eclipse-enthusiasts near the Sirheni-Camp in Kruger NP at 22°58.818 and E 31°18.222, we were clouded out at the most important moment in this year.

My equipment worked well, mini-telescope with mount was tracking the sun, but - only clouds at totality. To me, it seems we had the darkest eclipse regarding my 3 last eclipses. Obviously of the clouds, I believe. So when I think about the few pictures I got this time from the partial phases, I remember how easy it was last year in Chisamba. But - you can't force it! Better luck on Iceland 2003!

I'm writing on my web-diary called The Total Eclipse-Disaster Tour 2002. Only a few days, and I will release it on my webpage www.kernschatten.info Tour-operator was Outback-Africa. They did a good job driving as to the central line, outgoing from Letaba. Best regards, Alexander Birkner

From: Crocker, Tony (FSA)

Peter's equipment was next to his truck and the area was marked off with tape. But it was fairly close to the brunch setup area, and many of the spectators hung around there rather than walk through the bush and up the rock outcropping.

I do recall the saying "Nothing is foolproof because fools are so ingenious."

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From: Dale Ireland

some moron usually messes up most of my photos too..... me

Evan: I use red flags that utilities use to mark off the paths of underground wires and pipelines. I also warn intruders that they will be drafted into service should they step inside the perimeter. The service begins after totality, when I have to strike the set quickly.

I find that the hosting population respects my boundaries. However, I have had to run off some of the 'tourists'.

On the other hand, if someone in my group needs help, to tighten a screw or a length of tape for a repair, or even a spare camera body and lens, that is completely another story. My policy is to accommodate him as best as I can. If someone wishes to volunteer his or her services, I will try to fit that into the plans and pay the person back with a print. cheers/rbs

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From: Robert B Slobins

Dale: It may help us all to recall our accidents and what lessons can be learned from them.

The 'someone' who would write the methodology for successful eclipse work may well be me. So I need help about common and uncommon eclipse mistakes and how to avoid them. I refer to those aspects of the project that are under our personal control. cheers/rbs

From: KCStarguy@aol.com

Eric can you explain more about the details of the program? Dr.Eric Flescher

From: Eric Pauer

Peter, I am very sorry to hear about the bumped tripod. Unfortunately, it seems like we hear about incidents like this after every eclipse. I am glad to hear my software and hardware did what it was supposed to do. Let us know when you get a chance to post the pictures that you did take.

For others on the list that are interested, I developed some PC-based automated eclipse photography software for the 1999 TSE and have since refined it. It works like Glenn Schneider's Umbraphile but my program requires you to explicitly create an exposure file. The exposure file is a list of time sorted exposures, each with the time (absolute or relative) to take the exposure (to the nearest tenth of a second, eg 12:50:42.3) and the duration of the exposure (0.0333 seconds). The program sends a data stream out one of the PC's serial ports that is the length of the exposure. I designed some simple electronics to use the serial port signal to close a relay and take the exposures automatically. I added a Pause/Resume feature that lets you suspend the sequence in case of a passing cloud, etc., when we have the luxury of a long totality. The program runs on most Windows versions (95/98/NT/2000/XP). I'll have to add a feature to alert the user for careless passers-by. ;)

I provided the software to Peter and gave him the hardware design so he could build the electronics. If anyone else is interested in the software/hardware, let me know. Regards, Eric

From: Dale Ireland

Would you like me to help you start your list? I am the poster child of eclipse mistakes. I saw plenty in 30 seconds this time. Some examples (which I avoided), 1: remove your filter in time, 2: don't leave your f/stop at f22, 3; don't drink the champagne during the partial phase so as to avoid #1 and #2, 4: never never have your wife operate one of the cameras because she will probably make the same mistakes you make except she will cry, or, even worse, she will get BETTER photos than you do.

From: Glenn Schneider

Eric et al: FYI - This sounds in concept a lot like ASEC, the software controller for ROSE which was the precursor to UM-BRAPHILE. I put that to bed in 1991 after the eclipse in Baja, a well deserved rest. But, I thought you might be interested in the code which still persists on my server:

http://nicmosis.as.arizona.edu:8000/ECLIPSE_WEB/ECLIPSE_91/ASEC_1.8.0_SOURCE.html

The source code is a non-symbolic 6502 assembler with a dash of machine code (guess we have come a long way in a decade!) - but if anybody has an old AIM-65 or RM-65 module lying around, or even an old Apple-II (with some minor mods) it should still work - and takes VERY little memory. UMBRAPHILE is a hog compared to ASEC, but then again my old AIM only had 4K of 8-bit RAM.

If you go to the very end of the very end of the code you'll find a table definition called EXPTBL, which sounds just like you described above. Just curious, is yours a C program? UMBRAPHILE is APL, but I like the convenience of having the program create the log-ramp table for me. The source code for UMBRAPHILE is on my site too, and the core algorithms for the eclipse computations needed are not too complex. Maybe the Windoze folks out there could convince you to port it? Then again, UMBRAPHILE has helped me make a number of Mac converts from ex-Windoites.

> I'll have to add a feature to alert the user for careless passers-by.

I am working on a USB (platform independent) interface for a cattle prod, I'll be happy to share it with you... Glenn Schneider

From: Fraser Farrell

I have just seen the pictures my 12 year old took on Dec 4, using an el cheapo pocket camera....and one of them is a great photo of our group about 5 minutes before totality. Complete with eerie yellow-orange lighting, long harsh shadows, and everyone looking expectantly sunwards.

He even got a picture of totality. The print is totally black, with an orange-yellow ring ~2mm in diameter on it. May be able get more by scanning the negative. But I recall _my_ first TSE was over 2 minutes long and I totally forgot to take any pictures of it!

Should I be jealous, or parentally proud? ;-)

From: Geoff

Dale, Both things you mentioned happened in our group:

1) A friend forgot to take the solar filter off the video camera for totality, despite the fact they knew you were meant to watch it with your naked eye. I guess this emphasises the need to explain this stuff to people more fully.

2) Another friend made up a solar filter for eclipse photography on the morning of december 04! Never before had they ever done any photos of the sun through a solar filter - no test exposures, nothing. They shot the partials on auto exposure too. However, due to stupidity on my behalf, their photos will be better than mine, and I spent years preparing for this! --Geoff

From: Mike Simmons

I did this on an 80mm spotting scope in 1999. And I was using it visually! I had to move the scope at the last minute because there were people crowding around it right at second contact and I wasn't going to be able to use it myself. I couldn't figure out why I was having so much trouble reacquiring the now totally eclipsed Sun. Only after abandoning the effort did I realize the filter was still on it. Mike Simmons

From: Robert B Slobins

Thanks, Dale. In re: your wife, or any wife at total eclipses: Put her to work. Make her the field director, just like the movies. She will be able to do what wives are happiest doing: being the boss and a nag. She will keep you focused on the tasks and get a kick out of it at the same time. (Of course, you are the producer, anyway.)

(Continued on page 56)

If she has camera duties, so what if her images are better than yours? It is a team effort. My wife's presence in 1998, 1999 (especially) and 2001 (very especially) ensured success.

Just save romance for later. (My 8th anniversary is 23 Nov 2003, to be celebrated after third contact.)

<grinning, ducking and running from any wives who read this...>

Regarding items #1 and #2: CHECKLISTS!!!! Regarding #3---You got to be kidding---who was drinking alcohol before totality, let alone in a desert where he may dehydrate? cheers/rbs

From: Glenn Schneider

Joel Moskowitz, or any other M.D.'s on the list - Doesn't alcohol cause pupil contraction? I always thought it did - but may be anecdotal. Certainly , if so, it has the exact opposit effect you want pre-totally. In 1994 I was taking diamox (sp?) as prescribed by my doctor to ward of altitude sickness on the Altiplano. One of the side possible effects I was warned of was pupil dialation. I was never so happy with a prescription in my life! -GS-

From: Mel Bartels

Alcohol... hmm... A friend of mine has a nice video of the '98 Aruba eclipse. Partway through it he pans down for a few seconds to the beach to capture a guy passed out thanks to too much champagne waiting for the eclipse! Mel Bartels

From: Joel Moskowitz

Hi Glenn, Alcohol causes neither pupillary constriction or dilatation. What it does is delay the response of the pupil to light or dark. Part of the sobriety test cops administer at the roadside is to shine a light into your eyes to watch for the delay in dilatation, which can be as long as 8-10 seconds in someone who is under the influence. Joel M. Moskowitz, M. D. 8 (total)solar eclipses and counting

From: Dr. Wolfgang Strickling

Dear Eric, i am interested in your hard- and software. Perhaps you make a website describing more details about it?

I made up a similar device using the parallel port of a PC (used in 1999) or an organiser (Psion Organiser II, running 2001). More details about the organiser in my website http://dr.strickling.bei.t-online.de/sofi_org.htm (sorry, in German) and <http://dr.strickling.bei.t-online.de/orginter.htm> (the hardware extension for the organiser, in English). Best regards
Dr. Wolfgang Strickling Germany Dr.Strickling@gmx.de

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Pictures by Joanne Poitevin



"Clouded Out"

From: Vic & Jen Winter - ICSTARS Astronomy To: SOLARECLIPSES@AULA.COM Date: Sun, 15 Dec 2002

I think Mike raises a serious question here.

What constitutes clouded out?

I believe some people will have differing opinions on clouded / cloudy viewing of totality. While some purists may feel that any cloud obscures the effect to some degree, others may feel satisfied in observing corona, by making eclipse-edge timings or capturing shadow-bands on video.

I expect the association of clouded out would pertain to the ability to achieve the "goal" anticipated in viewing. As many of us have differing goals and expectations, I believe there is grey area in the definition.

For example, after our cloudy experience this year, I felt pretty-much skunked until I got home and found an image captured on real-film. Our goals are primarily photographic, so the one image through wisps of clouds was similar in success to us as a clear eclipse with broken equipment and no pictures. Interesting question to ponder... Clear Skies, Jen Winter

From: B0802Alex@aol.com

To me, it seems important, that you should share being clouded out while partial phase and while totality is running. I would be happy, if I have had the chance for only one second of totality this time. But the images on my film only show what we had: a few partial pics through the clouds. My group and me "only" felt the power of nature, when the shadow came above us. What a great disappointment near Shingwedzi. Although I reached the goal and was standig near the central line.

I never thought being clouded out while totality in Africa the months before the eclipse. That's what I expect with a high risk for the Iceland eclipse in 2003, first. And it's so pity about 2002, because I have to wait until 2006 for the next total with ground under my feet to fix a mount and telescope! So, congratulations for the brave who succed and went home as a winner.

A (german) diary about my trip to the 2002-eclipse can be found here :

<http://www.kernschatten.info/tse2002/main.htm>

In the next few days, I'll add the pictures.

From: Robert B Slobins

It all depends on one's goals.

A meterological expedition to a total solar eclipse would not care about clouds; it will make observations no matter what. Someone who is measuring light intensity is in a similar situation.

Sometimes clouds, and thick ones indeed, can make an impressive and saleable image out of what otherwise would be just another documentary corona picture. One never knows what some art director needs. cheers/rbs

From: Gerard M Foley

I am clouded out when I cannot see the inner corona. Thus I cannot see any circular object in the direction of the sun. It's happened to me two at of nine times. Gerry

From: Klipsi

**Crossing giraffe
(picture by Joanne
Poitevin)**



(Continued on page 58)

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> What constitutes clouded out?

.....

> Interesting question to ponder...

In the Outback of South Australia, "clouded out" happened at night : the Large Magellanic Cloud was just horrible light pollution ! ;-) by the way, speaking of light: we saw tremendous strong zodiacal light dec. 3 and 4 late evening, from Glendambo . Klipsi

From: Shivapuja@aol.com

i consider myself an eclipsophile, so though i love seeing the corona in a clear sky i don't really use the term 'clouded out.' i do, however, understand that others are corona-chasers, and therefor their experiences on december 4th were disappointing.

Jon Kern link for SENL

Subject: RE: Messina school From: Jonathan Kern To: solareclipsewebpages@bopenworld.com Date: Sun, 15 Dec 2002 15:04:47

Patrick, I was never able to get things straight with Deon and finally ended up lodging at a private residence in Messina. We had some clearing just before 2nd contact and managed to record the eclipse in fairly decent skies. Sorry we did not get the opportunity to meet you. Here is a URL with a report. <http://www.ligo-la.caltech.edu/~jkern/Eclipse02/> Regards, Jonathan Kern



Elephant (Picture by Joanne Poitevin)

Belgian "Urania" group also clouded out

From: Geert Vandenbulcke To: SOLARECLIPSES@AULA.COM Date: Sun, 15 Dec 2002 19:17:59

Hi All, Just back from SA. We wanted to see the eclipse about halfway between Kruger NP and Messina but were clouded out under a thick layer of rapidly moving cloud with even a few drops of rain, no chance to drive and chase an opening in the clouds. It became very dark during totality and darkness seemed not to last the expected 85 seconds, it seemed much shorter. We just managed to see some partial phases before and mostly after the eclipse.

As an aside, my efforts to keep my films from being X-rayed 8 times in the airports during this trip worked OK: before leaving I re-spooled the film in plastic filmcartridges and kept them in my pocket, they were never detected... Best regards, Geert Vandenbulcke

From: Gerard M Foley

This was also true aboard Olympic Countess. A little cloud diffuses a little, a lot of cloud diffuses a lot, so cloud scatters the light from the penumbra into the umbra and reduces the apparent size of the latter. Gerry

Eclipse Timer Software

From: Gordon To: SOLARECLIPSES@AULA.COM Date: Mon, 16 Dec 2002 02:14:54

Hello Everyone, I just wanted to report that we had a beautiful eclipse just North of Beitbridge, Zimbabwe with Bill Kramer's and Rick Brown's group. This was the debut eclipse for the Eclipse Timer software and I am happy to say that it worked perfectly. We used a Compaq iPAQ with external battery powered speakers in the field. The announcements about the partial phase phenomenon were so helpful and enjoyable for the first time eclipse viewers. They even served as a good reminder for the veteran eclipse chasers to discuss more information about the phenomenon with the first timers. The totality countdowns were extremely helpful. Especially the Mid-Eclipse point. Angie and I observed totality with binoculars until just after the warning tone for mid-eclipse finished; so 45 seconds of visual observation. We then knew it was time to take our totality images. The only problem that we had was that we did not have a good way to synchronize our Compaq iPAQs to an atomic clock in Africa. I did synch the iPAQ to my laptop the night before the eclipse. And prior to leaving for Africa I had synched the laptop to the atomic clock in Boulder, CO. However, in just a short 6 days from leaving the States, the laptop internal clock had slowed by a number of seconds which made our countdowns to 2nd contact and 3rd contact a few seconds late and therefore we did not obtain diamond ring images. I will address this issue in the future somehow. But overall I though the program was helpful and successful and so did Bill Kramer. I have posted our images on the Eclipse Timer website, the Africa Eclipse 2002 page, http://www.eclipsetimer.com/africa_2002.htm Thanks, I have really enjoyed everyone else's stories and images. Gordon www.eclipsetimer.com

Antares and mercury on film

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Mon, 16 Dec 2002 05:16:10

I can see Antares and Mercury on a photo during totality !

I did not have time to look for them during the eclipse, but as I look closer to my slides, it turns out that one wide-angle photo I took clearly shows Mercury and Antares .

can't scan the slide right now. I have a scanner but it used to work on another PC than the one I use now, and that other PC just crashed. The motherboard crashed, thus PIII overheats (no more fan) and PC shuts down before I can say "oops". Darn !

hope to be able to do so soon. Maybe I can install slide scanner on my neighbour's PC and scan it there . hang on! Olivier "Klipsi" Staiger

From: Gordon

Klipsi, I also have a wide angle slide of totality that was exposed long enough to see Mercury and Antares. I have the image posted on the internet, but on that scanned slide for the internet only Mercury is visible. On my high resolution scan at home (way to big to post) I can see Antares. The image was taken with 35 mm, ISO 200 slide film, f 3.8, 1/2 second. http://www.eclipsesetimer.com/africa_2002.htm Thanks, Gordon

From: klipsi@bluewin.ch

sorry to correct you, but I DO see BOTH Mercury AND Antares on YOUR webposted photo, too ! wonderful !!! ;-)
look closer: at <http://www.eclipsesetimer.com/images/totality,%20Mercury%20and%20jet%20contrail%20copy.jpg>

Mercury is to the lower right, "at 4:30" , 11 degrees from the Sun. Antares is at right angle and half that distance, to the upper right, "at 1.30 "

Excellent ! positions are upside down vs Australia's view, as you had it in morning , and we had it at sunset. Klipsi

From: Gerard M Foley

When reducing the file size for posting on the internet, very small objects can be retained in the resized image by using a "blur" or other degrading function on the large file before resizing. The result can be cleaned up by sharpening with unsharp masking, which should not erase the desired object. Your mileage may vary. Gerry

Sunset corona?

From: Vic & Jen Winter - ICSTARS Astronomy To: SOLARECLIPSES@AULA.COM Date: Mon, 16 Dec 2002 09:41:51

I've been waiting for someone to comment about the spectral difference in observing the corona at Sunset.

I was out this morning at dawn photographing the sunrise... and thought how different totality must look at this low angle. Did anybody notice a change in spectrum, due to refraction?

Were there any discernable effects in shape, color, anything at such a low altitude?

Jay do you have any observational insight on this issue? Clear Skies, Jen Winter

Giraffe (picture by Joanne Poitevin)



2 slides

From: Klipsi To: SOLARECLIPSES@AULA.COM Date: Mon, 16 Dec 2002 21:51:45

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dear friends, I found a way to get digital version of some of the slides.

here are 2 of them: <http://eclipse.span.ch/041202paparazzo.jpg> totality shadow. Canon wide angle 20mm lens, f/2.8 , likely set at f/4, bracketting with time exposure priority (don't remember time set, probably around 1/30 sec ?). this is the darker image of the 3 of a bracket series, the other 2 are brighter. Camera handheld (no tripod). Came ra body Canon EOS A2 (U.S. version of EOS 5). Original slide is more red/yellow than this digital version (scanned on CD-RW). Original film? Kodak Elite 100 (maybe set/pushed at 200, or maybe even Elite 200 ? Don't remember, don't want to take slide out of frame, don't really care what it was. I'm just happy about it ;-) In that image you can see my 3 digital video cameras: at left, the Sony 101 DV, with 0.6 wide angle converter. In center, Sony D8 , with open screen which shows tele shot of eclipse. And at right, in car, on dashbord, Sony Vaio laptop with in-built webcam. (do you think I like Sony products ? Wrong ! I LOVE 'em !) I made a few duplicates of that slide and there is a (slight) chance you will see it in some magazines. ;-)

<http://eclipse.span.ch/041202slide1.jpg> moments after 3rd contact. cropped enlargement of a photo taken with another Canon EOS 5 / A2. Slide Kodak 100 (or 200? or pushed ? again, don't wanna know ;-). Lens Canon 200mm/2.8, set at f/4. Handheld (no tripod) , exposure time priority on 1/500 sec , bracketting up/down, changing aperture. Original slide shows more red/chromosphere/prominence than this digital scan on CD/RW.

maybe later I can do my very own scans of the slides and enhance the red value of the pix. best regards, Klipsi

Why so bright?

From: Rybrks1@cs.com To: SOLARECLIPSES@AULA.COM Date: Mon, 16 Dec 2002 06:44:08

Every time a total solar eclipse begins (C2), I am amazed at how bright at first the very inner area appears. (This is after all photosphere is covered, no more beads, no diamonds, etc.) This intense brightness seems to last 1 or 2 seconds. And it also seems to occur a second or two before C3.

I started wondering about it a few days after Dec 4. Could it be physiological? I always wear a patch on my distance eye. But that would not explain it just prior to C3.

It seems very apparent to my eyes. And it seems brightest to me at the base of large prominences. I was using my new Coronado H2 alpha scope during the partial phase so I knew that there was a monster wide prominence at the 1 o'clock spot. When it went total the base seemed extremely white bright to the point where it definitely drowned out the pink of the prominence for a few seconds. I jumped on the 100mm x 25 power binocs and it seemed true in the binocs too for a short time. Could it be that the base of the prominences/chromosphere (relatively darker gas) are reflecting the intensely bright photosphere just below? Or is it just that the corona is brighter nearer the solar limb? The brightness is always centered near the contact point and not near the north or south points of the Sun which overlap a wider part of the limb. The brightness seems to cover maybe a 30 or 45 degree arc of solar limb.

I did notice this effect also when I was only 6 km from the southern limit Aug 1999 and it seemed to roll around the bottom. I am curious of everyone's opinions and perceptions on this. I don't know why it took so many years for me to now ask this question. Sincerely, Raymond Brooks

From: Joel Moskowitz

Hi Ray, I would say that this sounds like chromosphere. Joel M. Moskowitz, M.D.

Belgians (PP, Paul and Jean and Monique Deleu) meet at Singelele Camp in South Africa (picture by Joanne Poitevin)

