VOL. 10 - 2012



THE NEWSLETTER OF THE 51st SOUTH AFRICAN NATIONAL ANTARCTIC OVERWINTERING EXPEDITION



THE FINAL CHAPTER

By the time you read this newsletter we will be back home and you might have heard the stories first hand. It was compiled on the SA Agulhas II while making our way back to Cape Town, and will serve as the last installment of our series of newsletters. Hope you enjoyed reading them as much as we did making them..

Antarctica left a restless longing in my heart beckoning towards an incomprehensible perfection forever beyond the reach of mortal man. Its overwhelming beauty touches one so deeply that it is like a wound. - Edwin Mickleburgh

TO SUMMER STATION..AND BEYOND

Stefanie Strachan

So the time finally arrived for us to depart on our final CAT train to meet the SA Agulhas II at Atka Bukta. As you might remember in the previous newsletter, we had quite a bit of preparation work to do, as well as some repairs to the



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base before we could depart.

Saturday 16 December 2012

06:00. After a night of no sleep, all prep/repair work is finished, and six very tired team members set off on the last 'solo' journey across the continent. Hopefully, the decision on who gets to sleep first and who has to stay up even longer to drive will not end up in a fist fight.

06:02. Challenger 1 does not want to pull away because the load is too heavy. Change



loads with Challenger 5. Drive in the other Challengers' tracks.

Sunday 17 December 2012

01:00. Scheduled stop a few kilometers past halfway. The Caboose must be set up with repeater and antenna and tested. Sledge with three 3000liter diesel bowzers to be left close to Caboose for use during



takeover. Coordinates of both to be stored on GPS. After refueling Challenger 3, a leaking seal on one of the diesel bowzers is discovered and has to be emptied. The Challenger pump takes too long so we employ a hand pump - one liter per turn of the lever.

03:00. Repeater works for close proximity radio calls, hopefully also for SANAE to Summer Station

communication. Coordinates are saved and cargo sleds are checked. The journey continues.

03:10. Challenger 5 is driving too slow compared to the other two that each dropped off a sledge. Interchange loads.

07:00. Starting to fall asleep at the wheel, change three

hour driving shifts to two hours. Can't sleep much either because of all the bumping around. **12:00.** We can see the German base in the distance.

> Finally, other life. At least three more hours of driving ahead, but spirits are lifted. Open the last packet of Jelly Babies.

> **15:00.** Arrive at the German base. Get invited for coffee, but decide we should rather continue to Summer Station to start up the base and get running water. Everyone also smells a bit 'off' and might offend the Germans. Only 7km to go.

15:45. Finally arrived at Summer Station. The Germans were kind enough to start up the generator and leave food. The smelly has to be set up outside the base.

18:00. The ice inside the smelly is still not melted. Note to future users, fill only the bottom part till just above the heating

elements and wait until it has melted before filling up the rest of the smelly with ice. Teammates are tired and want to wash and go to bed. Arguments arise.

21:30. The smelly is finally melting ice and we have pumped three loads up to the base. Break for dinner.22:30. Two more loads pumped to the base. Still not enough for showers. At least we can brush our teeth and wash our faces.

23:00. Everyone is tired and heads off to bed, finally.

Monday 18 December 2012

08:00. All hopes for sleeping late will have to wait.The 'garage' (also known as the old German base, Neumayer II) has to be dug open and cargo stored inside has to be inspected and removed if possible.09:00. We take turns filling the smelly and when full, pump the water up to the base.

12:30. Another smelly load pumped up to the base. Everyone is hoping for showers tonight. We head into



the garage through the hatch to have a look at the vehicles left there in Feb 2012. All still have power. **13:00.** The shoveling starts. We found a German shovel next to the hatch and decide to use it. It is German, so it has to work.

14:30. The snow is thick and the shoveling takes longer than expected. The wind has also increased significantly. The radio tech heads off to the Germans for advice on the HF communication for Summer Station. He wants to go on a skidoo, but we rather send him in one of the Challengers.

15:30. The wind still increases and lots of the snow thrown off the garage door just blows back.

16:30. The garage door is finally cleared of snow. We head back to base for coffee.

16:45. There is a mini whiteout outside. We get discouraged because we will have to clear the garage door again tomorrow. Most are glad that the radio tech took a Challenger.

18:00. The radio tech returns with a box of fresh fruit from the Germans. First fresh produce we have seen in a year. Everyone digs in. We have also been invited for drinks at Neumayer.

18:30. The water tanks are finally full enough for each of us to take a shower.

19:45. We head off to the Germans.



Tuesday 19 December 2012

04:00. After way too much socialising, we head back to Summer Station. We are probably going to regret staying up so late in the morning.

07:00. Woken after a sched with the SA Agulhas II, they want to fly in the driver team at 08:00.
08:15. Summer station has been invaded by drivers, dozers, and other takeover personnel. We are crammed into five rooms, and one person has to sleep on a mattress. Luckily there are a few familiar faces.
10:15. Everyone heads out to get the old cargo ready for loading back on the ship. We try to help, but it feels a bit like we are more in the way than anything else.

13:00. Choppers are flying priority cargo from the ship to summer station. One container with CAT spares and tools was dropped maybe 25meter from the ground. More cargo work.



Wednesday 20 December 2012

07:30. Everyone is up and ready for another day of cargo work. Coffee, breakfast, and the day commences.

18:00. We have been invited by the old German team to visit the Emperor penguin colony with them. Everyone is very excited. They pick us up in a modified Piston Bully that seats about ten people.
18:40. We arrive at the rookery. You can smell it before you can see them. We walk the last 300 meters to the larger group. You can see from the amounts of pooh and dead baby penguins in the snow where the rookery was previously located. There are literally more than a thousand penguins standing around. Sizes vary from still fluffy to adult penguins. Two Adelli penguins somehow ended up in the wrong place and hoped the others won't notice that they are different. Some of the penguins are very curious and come up to two meters away from us.

22:00. Nobody wants to leave, but both the Germans and us have to get back to our respective bases. On the walk back to the Piston Bully some of us gather up

enough courage to touch one of the dead baby penguins. It is completely frozen so it has not started decomposing. The fur is really soft and fluffy. I am sure it would make the best blanket ever. The feet



have tiny bumps at the bottom. Even dead, it is adorable.

Thursday 21 December 2012

08:00. The plan is to off and back load cargo from and onto the ship. Five Challengers and two skidoos head to the ice shelf. We pimp out a skidoo sled with mattresses and ride on the back. **09:00**. Arrive at the bukta. The new ship looks massive. The ice shelf needs to be inspected before they can start offloading anything. Flags are planted where we are allowed to walk and drive. We depot the loads about 200 meters away from the edge of the shelf and drive closer one sled at a time. PWD crew is offloaded first to assist in the cargo hooking and offhooking process.

11:30. We are swung over onto the ship for lunch. After lunch we get to stay on the ship to explore. It feels strange seeing so many new people. I am not sure how to answer all the questions or even how to have a proper conversation with these strangers. Maybe I lost the few social skills I had during the year.

15:00. We are swung back onto the ice. We also get to meet the new team that is helping with the cargo work.

Friday 22 December 2012

08:00. More cargo work at the ship. We stay at Summer Station to help out there.



14:00. The chopper drops off a spare engine that needs to stay at Summer Station for the rest of the takeover period. It weighs roughly 400kg. We store it in the garage by driving it down on a sled with the dozer. Everyone tries to ride up the garage slope on the back of the sled. It is quite a letdown since it is not half as steep as we all thought.

Saturday 23 December 2012

08:00. We are to be flown out to the ship in an hour. **09:10**. The chopper takes six of us on the first flight back to the SA Agulhas II. We will be traveling to RSA bukta and then flown to SANAE where we will find our home invaded. Our year alone is officially over. ϑ

A BIRDER'S VISIT TO SANAE IV

Andrew Schofield

On the 29th of December 2012 | was very kindly offered a place on the helicopter to visit SANAE IV, it was an opportunity of a lifetime and I accepted with glee. The trip initially was to be for two days but the circumstances changed and I was privileged to stay on till the 4th of January 2013. I made it a point that from the time I arrived to get in as many bird observations as possible, and straight after introductions and orientation Jako took us for a walk to the Northern Buttress. During the walk I saw 8 snow petrels wind coursing on the edge of the cliff.

SANAE IV is situated on a mountain that has a dramatic cliff right in front

of it, this cliff creates perfect habitat for birds to utilise for soaring and for breeding. The birds of three different species were observed utilising the cliff face for soaring purposes and two for display purposes. There were two South Polar Skua's wind coursing and doing display flights along the northern ridge. I am more than convinced that Snow Petrels are breeding on Vesleskarvet





(barren little mountain). Having observed their behaviour for a period of seven days, and from three aspects of the ridge, their behaviour suggests that there are two nests on the south face of the northern buttress and from observations from crystal palace and the wind scoop there are another three nests on the northern face of the north buttress.

The Snow Petrel is the only member of the genus Pagodroma. It is one of only three birds that breed exclusively in Antarctica and has been seen at the South Pole. It has the most southerly breeding distribution of any bird in the world. Snow petrels are pure white birds with black beaks and eyes, and are the size of a pigeon. They feed largely on krill and mostly found near to the sea in order to feed. However, a known breeding site is at RobertsKollen and the return flight from the sea is three hundred



kilometres. Add on about forty to SANAE IV and you will understand the distances involved in collecting food for their chick. The courtship ritual consists initially of a male snow petrel following a female as she flies around the nesting area which is frequently a rocky

outcrop or cliff with suitable ledges or nest holes. Nests are simple pebble-lined scrapes usually in deep rock crevices. One white egg is laid in late November to mid-December. I have now seen this activity here at SANAE IV in early January. The egg is incubated for about 44 days and the chick is brooded for 8 days. They fledge 7 weeks later in late February to mid-May. Snow petrels live for about twenty years and partner for life.

They produce a stomach oil made up of wax esters and triglycerides that is stored in the proventriculus. This is used against predators as well as an energy rich food source for chicks and for the adults during their long flights. Snow Petrels also have a salt gland that is situated above the nasal passage and this helps to remove excess salt from their bodies. They excrete a saline solution from their nose.

Birding counts at SANAE IV 29 December

8 Snow petrels
1 Wilsons Storm petrel
12 Antarctic petrels
3 South Polar Skua
30 December
7 Snow Petrels
76 Antarctic Petrels
3 Wilsons storm petrels

4 South Polar Skua. **31 December** 2 Wilsons storm petrels 5 Snow petrels 2 South Polar Skua 54 Antarctic petrels 1 January Nesting snow petrel on south face of the north buttress. 7 Snow petrels 46 Antarctic Petrels 4 South Polar Skua 2 January Snow petrel breeding activity on the north face of the north buttress. And on the south face of the north buttress. 26 Snow Petrels 5 South Polar Skua Flock of Antarctic Petrels more than 20 (I counted up to) possible 25-30



3 January

22 Snow Petrel 18 Antarctic Petrel 3 South Polar Skua Very interesting interaction between a pair of Skua's on the Northern Buttress. The one would land on a rock near to the ledge and the other would fly nearby and swoop near to it. This would continue till the first one flew up and then they would do a synchronised flight of weaving and jinking fast left to right and then wind soaring together along the cliff ledge.

There were 3 pairs of snow petrels soaring along the northern edge of the buttress. After a while they had disappeared and only a solitary bird was seen cliff soaring. 4 January
14 Snow Petrel
50 + Antarctic Petrel
3 South Polar Skua
6 Wilsons Storm Petrel

The Antarctic petrels flew in small flocks and used the Nunataks as either directional markers or for convenience of wind soaring along the ridges. The Antarctic Petrel sightings were mostly at 6:30 am and at 10:00 pm (the sun shines for 24 hours a day at present).

The Wilsons Storm Petrels were

seen mostly at mid-day when the sun was at its highest. I had the opportunity to visit Klein Koppie which is situated to the North East of SANAE IV. When you climb to the top you look straight at the northern buttress's northern face. It was from here that the Snow Petrels' nesting sites can be observed by watching the birds fly to their nest and disappear into a crack or small overhang.

On the koppie we found the remains of a Snow Petrel that had died (unknown causes)

however the carcass had been pecked clean by the South Polar Skua's. This had been observed by a group who had visited the koppie the day before.

My best wishes to S52 for the year ahead and my congratulations to S51 for the year that they have had at SANAE IV. I would like to thank all of the people at SANAE IV for making me so welcome including lan Meiklejohn and his team, and a very special word of thanks to Mr.Adriaan Dreyer for making it all possible.

During the voyage down to the Antarctic and all the time that Andrew Schofield spent both on the Agulhas II and at SANAE IV and even down at South Georgia and the South Sandwich Islands, he filmed all aspects of the Antarctic, the wildlife and the people doing what they do down there. He and his award winning team will put together a full length film with a voice over which will be ready for distribution on DVD at the end of April. Please send him your email address to <u>andschofield@gmail.com</u> and let him know if you would like a copy and to get onto this documentary film makers mailing list. Andrew is leaving for Ghana and will be away for the month of March, so please do not be upset if he does not reply immediately, he will when he gets back from the forests. Andrew has created many documentaries on the wildlife of Africa including animals such as Lions, Elephants, and Cheetah and many of the smaller creatures.

SANAE 51 TAKEOVER GRUNEHOGNA TRIP

Jon Ward

The summer take-over period brings a flock of activity to the SANAE base. For the overwintering team, this marks the beginning of the end. However, this can also be a very difficult time for the over-winterers as your daily routines are now disrupted and the base that has been your home and sanctuary for the last year, is now home to nearly 100 people.

Nevertheless, you press on; there is still a great deal of work to be done. The new team has to be trained and maintenance operations need to be performed to prepare the base for the upcoming year.





Towards the end of the take-over, there is a ceremony that takes place called the take-over function, during which the old team finally hands over control of the base to the new team, who have, by this time, completed most of their training.

The tradition is to give the new team a 'dry run' at running the base, without the assistance and supervision of the old team, in order to assess whether they are fully prepared for the tasks and to iron out any gaps in their training.

This affords the old team the opportunity to get away from the base and take a much needed break from all the activity. This year, it was decided that we would travel back to the Grunehogna area, which we had previously visited in November.

The atmosphere at this time was very relaxed as most of us were relieved to finally be off duty. The planning went smoothly and even a few jokes were being thrown around the room, especially when it came to deciding what food we were going to take, with overwhelming support for pizza for every meal!

Things in Antarctica usually take a little more time to prepare than usual. We were planning on making an early exit from SANAE, but there are always last minute things that pop up and weather delays, so I was really surprised when we actually got to leave on time. But I suppose with an entire year of practice and some relatively good weather, we were bound to get it right at some stage.



So off we went, towards Grunehogna, about 55km away from SANAE. The wind was a little strong and the temperature moderately cold so most of us took the opportunity to get some day-time-napping done in the caboose. A big thank you goes out to Vince, Mike and Braam for doing the driving.

When we arrived at Grunehogna, we were greeted by one of the Geo field teams, who had been camping and working in the area for several days. I am sure they were glad to see some fresh faces and we were glad for the additional company.

Unfortunately, we did not have much time to spare, as we were expected back at SANAE in the afternoon the next day, so we immediately set off on our first hike up one of the mountain peaks. We spent several hours on

the mountain and were all very moved by the beauty of the area; there were plenty of photo opportunities as well as some opportunities to practice some safety and fall arrest techniques one final time.



When we came down the mountain, Elrich had started a braai and we sat around the fire for a little while, but fatigue had conquered most of us and we took an early night so we could get up early the next morning for one final hike.

The next morning, we went down into the wind-scoop for some final photo opportunities, before packing up the caboose and heading back towards SANAE. On the way back, we stopped at another mountain for a short hike and some more photo opportunities.

All in all, it was a great trip, thoroughly enjoyed by all and I think we were also all very glad to see on our return that S52 had not burned the base down during our absence. ϑ



BALLOONS AT SANAE

John Sample

This takeover featured a unique scientific effort: the launching of

high altitude balloon payloads to study the Earth's radiation belts. The project, BARREL, is a NASA project run by Dr. Robyn Millan from Dartmouth College, NH, USA. BARREL includes some

SANSA collaborators and relies on additional support from SANAP and personnel at the base. Launching these massive balloons requires a team of around 7 or more people for each launch. BARREL sent two American takeover personnel, Brett Anderson and John Sample who trained a team in the art of balloon launching.

Team members from S51 and S52 as well as the SANSA volunteers were the primary contributors to the 13 balloon launches that took place.

Each balloon carries a 20kg payload which includes a high resolution 7.5cm x 7.5cm x-ray detector

for looking at something similar to an x-ray version of the aurora. Both this x-ray aurora and the visible aurora seen around SANAE in the winter's darkness are created when energetic electrons smash into the upper atmosphere. The main difference is the energy of the incoming electrons. BARREL is looking at electrons with more than 30x typical auroral energies. Since the sky is quite dark in x-rays, these high energy electrons can be observed even though the sun is up.

The payload also includes a magnetometer, although not as sensitive as the SANAE magnetometer. It provides context

for the x-ray measurement as the balloons drift away from ground based stations. In fact, all the SANAE space physics measurements are complementary to the BARREL science goals, especially the riometer, magnetometer, VLF and the SuperDARN radar.

Although the balloon itself weighs 18kg, the balloon material is only 0.00076mm thick and needs to be handled with great care during the launch process. Balloon launching needs to take place in low surface winds because the balloon scatter the x-rays, which is why the detectors must be carried to such high altitude to make these observations.



acts like a sail while it is being filled with Helium. BARREL launched one balloon at 10 knots, but tried hard to launch at 6 knots or below. The balloon eventually inflates to a size of 3x a typical blimp ~8500 m³. When fully inflated they are 24m tall and 27m in diameter. Although they are filled to only 10% at ground level, they expand as they go up and are visible even after they reach their maximum altitude of ~38km (almost 4x the altitude of a typical jet airline). The x-rays that BARREL payloads observe are generated at about 75km, but have no trouble making it down to the balloon altitude. Below about 27km the atmosphere is thick enough to

On clear days the balloons were visible almost 12 hours after launch when they were 100s of kilometers to the west. The balloons were launched throughout the month of January and gradually drift away from SANAE so that over the course of several launches a distributed array of observation

points can get a big picture of the electrons hitting the upper atmosphere. During the Antarctic Summer the polar vortex is a consistent pattern of high altitude winds that circle the continent, keeping the BARREL payloads in prime viewing locations for roughly 10 days. Several of the BARREL payloads lasted 16 days each (and went more than half way around the continent) and the total data volume returned by this year's balloon campaign (all in real time via the Iridium satellite network) was well in excess of the BARREL team goal. The BARREL project also sent a launch team to relatively nearby



Halley Bay through a collaboration with British Antarctic Survey. That launch team included the project Pl, Dr. Robyn Millan. Between the two launch teams 20 balloons were launched with 19 successful.

BARREL is also making observations in association with two NASA spacecraft launched this past August. Those spacecraft, The Van Allen Radiation Belt Storm Probes (RBSP), make measurements of the high energy electrons and protons that are trapped by the Earth's magnetic field. Some of these same electrons "precipitate" along the magnetic field and crash into the atmosphere over Antarctica, the BARREL balloon observations get tied to the processes that RBSP observes in the heart of the radiation belts. RBSP is expected to operate for 2+ years and BARREL will be

back to SANAE next takeover for another year of balloon launching.

The most common question asked of the BARREL personnel is, "Why SANAE? Why not go to one of the American bases?" The answer lies



in the tilt of the Earth's magnetic dipole. McMurdo, the largest US base is too close to the magnetic south pole and there is no connection from there to the Radiation Belts. BARREL is the culmination of 17 years of balloon flights observing very high energy electrons hitting the atmosphere. The first Antarctic flight to do so was MAXIS launched from McMurdo in January, 2000. MAXIS flew around the continent for 8 days without seeing any high energy precipitation due to the high magnetic latitude it started from. Soon after passing just south of SANAE it began to observe a wealth of x-rays. MAXIS lasted 19 days, but for the BARREL balloons that last around 10 days it is a waste to start from anywhere besides Queen Maude Land. The prime location, logistical support, reasonable weather and South African collaborators make SANAE a great choice. 🖑

LAST DAYS AT SANAE

Johan du Plessis

Things end.

Our 14-month stay in the white wilderness (which sounded as long as a lifetime) came to the last month, then to the last week and then finally to the last day.

It awoke a lot of mixed feelings, not only within each individual but also within the team, part wants to stay, part wants to go. Part is looking forward to be reunited with family and loved ones but part of you is sad for leaving this very special continent, a continent that became our home. And what a home it has been? Landscapes that are so beautiful and so large, so wide, so open and so empty. Colours that to the casual observer might be called white, which in the detail are ever changing and ever mind blowing. Pinks, purples, blues, greens, yellows, and millions of variations of the above. A beauty that can be described as void of emotion or memory. A beauty that one moment blows your mind but the next can blow you away. A beauty at times so inhospitable and so harsh that it ever stays out of reach.



But things end and so we became more and more aware that our days on this continent are limited. Unfortunately, for an over winterer the stay on the ice does not continually build up to end on a high note. The last part of our stay was partially filled with what makes the wilderness so alluring. A little too many ego's, a little too much politicking, a little too much of what humans do when resources are scarce. It may seem that it ruined some of the experience but I think it highlighted what made this experience so special. To have so much space, to share thousands of hectares with only 9 other people is guite something. Sharing the 3 000 square meters inside the base, at times, was something different of course, but to experience a year without any threats of crime or to not have a constant man made media deluge to digest was a true sabbatical for the soul.



So to stand at the end of this adventure I ask myself if this expedition was what I expected it would be? I think in many respects it wasn't. I expected a little more outdoor adventure and maybe a little more camaraderie. Although, it is comforting to believe things might turn out as we expect, the surprises life has in



store for us are sometimes the biggest gifts of them all. So, for the sake of the argument, to want what we expected would be to forfeit the incredible privilege to see Antarctica, as I surely never expected to see it.

As we leave, we need to admit how small our lives felt at times. We became so engrossed in the tiniest nuances of our lives in and around SANAE. Integrating back into society might be more challenging than we realise but as we walk away from the white wilderness, friends made and experiences shared, I hope we will be forever changed.

MEET \$52

From left to right: Name: Cornelia Oberholzer Age: 30 Job description: Space Weather Engineer

Name: Jacobus (Pieter) du Plooy Age: 53 Job description: Diesel mechanic

Name: Craig Harrison Age: 46 Job description: Mechanical Engineerng

Name: Adam Zieba Age: 29 Job description: Team leader, Electronic Engineer



Name: Karabo Mokwena Age: 26 Job description: Meteorologist

Name: Philip Mey Age: 26 Job description: Radar Engineer

Name: Grethe Rademan Age: 26 Job description: Cosmic Ray Engineer Name: Robert Coetzee Age: 42 Job description: Deputy leader, Doctor

Name: Kgomotso Puleng Age: 33 Job description: Electrical Engineer

Name: Wihann Groenewald Age: 27 Job description: Diesel mechanic



A FINAL WORD FROM THE TEAM LEADER

Jako Bester

"If Antarctica were music it would be Mozart. Art. and it would be Michelangelo. Literature, and it would blessings. be Shakespeare. And yet it is even greater; the only place on earth that is still as it should be. May we never tame it." - Andrew Denton.

After 14 months on the dancing, joyfully ice one cannot expect to return home unchanged. After months of sweating blood and at times crying tears of sadness and even joy, it becomes difficult to summarise a unique experience shared with they would carry you so very few. After realising that we have

done what only about 500 other South Africans in history have has to offer. It brutally experienced before us, you start to count your It has been a privilege to watch the amber glow of an antarctic sunrise.A delight to look up into a starlit sky and enjoy the southern lights taunting one to join them where they seem to be just beyond one's reach. It has been an honour to share the snow and 'smelly' trenches with friends shovelling at one's side, knowing through the worst of storms. It has been a

blessing to experience the lessons this place demands perseverance. It nurtures patience. It urges one to get out there and to not wait for tomorrow as tomorrow may bring a 70 knot storm. It distinguishes the best from the worst in each individual, it lets one weed out the bad and build on the good. It teaches one to give more of oneself by rewarding one a tenfold return. It is the place where God whispers and it is quiet enough to hear if one is willing to listen.

AT HOME IN ANTARCTICA

Poem by Claire Beynon

In this place, silence has a voice

wide-ranging as the continent. some say it's on the cusp of madness, the way it hums and stutters, mutters to itself in quietest tones.

In this place, nostalgia roams, patient as slow hands on skin, transparent as melt-water. Nights are light and long. Shadows settle on the shoulders of air.

In this place, the universe brims. Inside absence, presence. Inside distance, dust and our sleeping earth dreaming beneath her thin blue mask of ice.

Time steps out of line here, stops to thaw the frozen hearts of icebergs. Sleep isn't always easy in this place where the sun stays up all night and silence has a voice.



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SAWAE TRENDS

Temperature

Maximum	3.1 °C
Average Max	-4.2 °C
Average	-6.1 ºC
Average Min	-8.3 ⁰ C
Minimum	-14.7 ºC

Pressure

Maximum89Average Max89Average88Average Min88Minimum87

898.5 hPa 892.3 hPa 888.1 hPa 884.0 hPa 876.7 hPa

97.9%

69.4%

19.7%

15 Knots (27.7 km/h)

58.5 Knots (108.3 km/h)

Humidity

Maximum Average Minimum

Wind speed

Mean Maximum Gust

Daytime lengths

Average day length 24 hrs

THANKS TO OUR SUPPORTERS:

Quote of the month

Elrich (over the radio, trying to explain that the approaching plane will do a low fly by): "The plane will we doing a flow bypass before landing."

Johan (on the SA Agulhas II, a few days before we reach SA): "It is SO good to feel wind that does not hurt you!"

Johan: "I think I got some frostbite on my frontal lobe."

(A quote explaining the communication between Americans and South Africans) Brett (American): "Steve, why do you have your coat on?" Steve: "What? Why don't I coconut?"

Movie of the month

In Time

Song of the month

Wrath Pinned to the Mist - Of Montreal I'm on a boat - Lonely planet

Dish of the month

Takeover function dinner





Support also by the following individuals: Homemade Buffs – Mrs du Plessis Homemade Ginger Biscuits – Mr and Mrs Knoesen,Mrs Bester