



Newsletter #5
May 2013

SANAE 52

»» Hello darkness,
my old friend...

The Last Sunset

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SANAE LAND

Quenching the Thirst

No-Dieting Fondue Party

Making Yogurt

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Power Generation

Stats & Sponsors

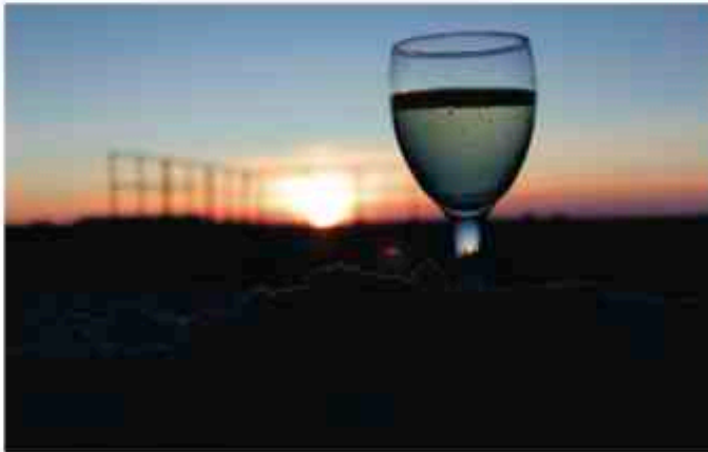
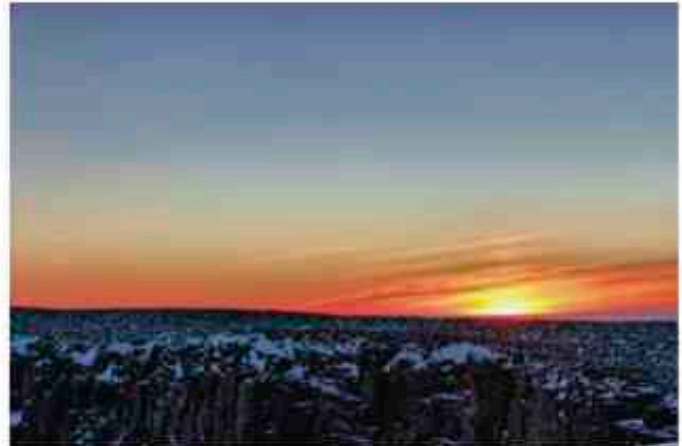


Last Sunset ««

by Rob

The 15th of May marked our last hour of sunlight for the 2012/2013 summer season. We've been watching the sun's progress over the past few months, with progressively later dawns and earlier sunrises as we counted down to the 15th.

It's interesting to note that each sunrise and sunset occurs on average 6 to 7 minutes later and earlier each day respectively. On Jan 31, when the sun touched the horizon for the 1st time it occurred directly due south, with the opposite happening as winter is approaching – as the days grew shorter, each and every sunrise and sunset marched steadily to the north.



All this culminated in our last hour of sunshine at noon on the 15th of May, after which the sun will remain below the horizon for 2 and a half months. The official times for our last hour of sunlight were: Sunrise 11:33 and sunset at 12:41.

We all gathered on the heli-deck in freezing conditions to commemorate this momentous occasion.

A lot of photos were taken, a lot of champagne got drunk and the day turned into a spontaneous and unofficial celebration! Great fun was had by all, and we're sure to do it again when the sun

peeks above the horizon for the 1st time on 27 July, signalling an end to the long dark days of winter, and the start of spring here in Antarctica.



From the science
equipment to the base

(Ad)Ventures in the Dark

by Philip

As you all know by now, the sun has set on us for the last time till Summer returns. Although we still get a faint glimmer of light in the middle of the day it is not enough to go outside without a backup light. Therefore, it is a good idea to take the following items on one's nightly excursions.

Torch - good for when you need to find things (e.g. something you dropped... the base... etc.)

Headlamp - general usage to see where you are walking.

GPS - as a backup it is a good method of finding your way.

Radio - to communicate with your fellow adventurers.



"Working" at night

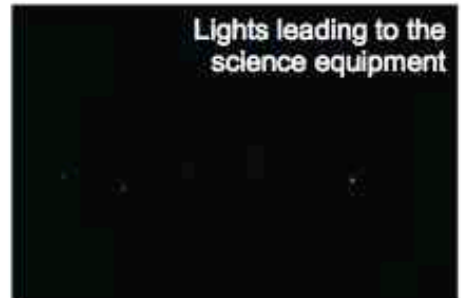


There is always work to be done even "at night" and sometimes more often than not. As such, we have lights leading down to the smelly; and also to some of the scientific equipment that need routine maintenance throughout the year. This gives you a general idea of where to go - so as not to get lost.

Returning back to base

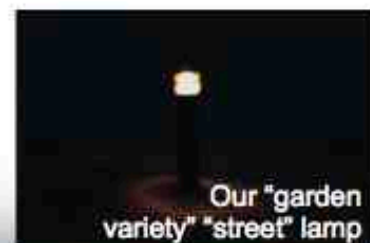
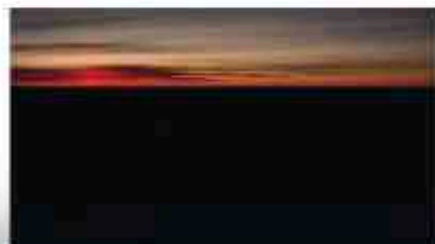
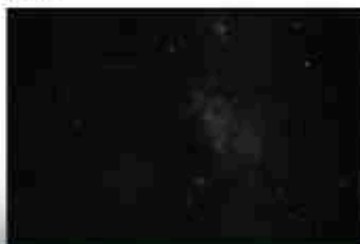


Lights leading to the
science equipment



What to do in the cold, dark, outside world?

As I have already said, you really only need to go outside to work. And that is either to throw snow into the smelly; or to check or repair scientific equipment. But the constant darkness does present some unique opportunities - like watching stars during the day; experiencing and photographing auroras; and possibly even more exciting things. That being said, in a month or so we will probably all be exclaiming how great sunlight is and how many hours* to go before it returns.



Our "garden
variety" "street" lamp



*1100 hours to go - give or take

Philip, Grethe, Adam and Craig outside during an Aurora

SANAE LAND

by Adam

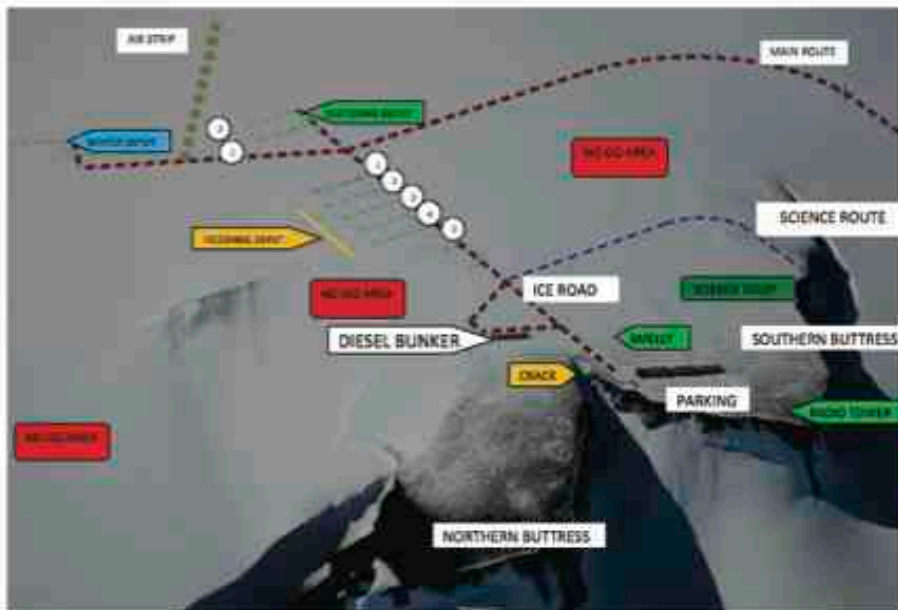
Welcome to SANAE Land. Rule 1 bring a towel. Rule 2 always have a radio. In Newsletter 3, Rob and Grethe talked about the layout of the SANAE IV building. I thought that I would introduce the layout of the base as a whole.

The base and surrounding areas are divided into 'zones'. Zone 1 includes the parking and area where snowmobiles and tractors are parked, the HF/VHF radio tower, Smelly, diesel bunkers, the summer/incoming depot (where supplies are stored during the summer) and the ski way or airstrip.



Along flat ice road links up these areas. Without a road it can be very bumpy and uncomfortable to drive on the ice.

Zone 2 is considered a sensitive area. This is where some of the stuff that Grethe and Philip have talked about is located. The only permitted access is either on foot or via skidoo on the 'science route', this is to minimise interference caused by metal objects. The Northern buttress, considered sensitive due to lichen growth, is also in this zone.

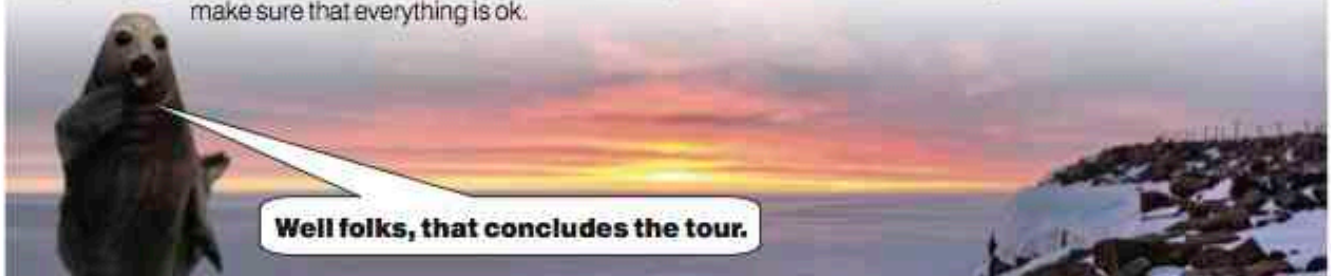


If one wants to get out of the base and the weather is good, The wind scoop (zone 3) is a great option, but quite an excursion. To give an indication of scale, the ski way is 1.8km from SANAE IV base. A trip to the wind scoop takes one all of the way around the southern and northern buttresses on the main route out of the base. Winter depot, houses equipment which is not needed after takeover.

When one needs to go on a trip to EBase (two days away if you are fortunate) one ventures into the 4th zone. There is little but ice and snow, so one best be very prepared.

The final zone is number 5. Access is limited to only those with a permit, which includes geologists who frequent the base during the summer.

As you may guess we pretty much stick to zone 1 and 2. Every now and then someone will go down to winter depot to make sure that everything is ok.



Well folks, that concludes the tour.

Quenching the Thirst

by Grethe

Amongst my fellow overwintering team members are a few cunning druids that lurk in the corners and brew cauldrons of potion. The main culprits in this dark and yeasty smelling underworld are Wihann, Philip and Adam.

Yes, potion I said, it must be, for the aroma will hypnotise you and lure you to the deep dark depths of the Sastrugi Inn Bar where the sweet taste will make you forget all your troubles and make you wake up wondering what the hell happened last night. They call this potion ... beer, and I peeked into their dark corners to see how it's done.

They have made 3 kinds of beer thus far. The first two was a German Lager and an English Bitter. The most recent one was a Coopers Pilsner.

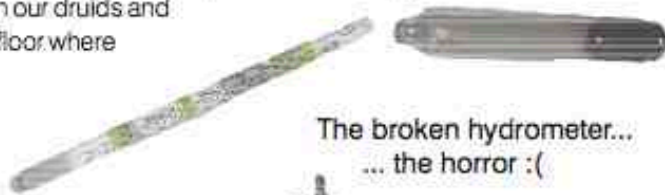


The first step is washing out the 20 quarts bottles they specifically brought for this purpose with the blue bottle washer. They then use their beer kits with some extra brewing sugars and water and add it to the copper tun where it ferments.

They use the hydrometer to take gravity readings before adding the yeast, and just before bottling to work out the final alcohol content of the beer. But recently a tragedy has befallen our druids and "he who shall not be named" dropped the hydrometer on the floor where it broke in two. What a sad day indeed.

For the bottling they need a special bottling gun-like thing and a lot of unused caps. They bottle them with some sugar balls that apparently makes the gas, leave them in the fridge for a couple of weeks and then the magical potion surfaces to tempt everyone once again ...

... and there is nothing better than a nice cold beer after a hard days work.



The broken hydrometer...
... the horror :(



The brewing tun, beer kit, sugar balls, bottle caps, and brewing sugar

The bottle cleaner and bottle cap gun-thingy

No-Dieting Fondue Party «

by Wihann

It was no-dieting day on the 6th of this month, but since we're in Antarctica, we have no clue about time or even what the date is, so we missed it. We dived that we should instead celebrate it on Friday the 10th.

Grethe had the best idea ... have a fondue dinner party. Because we were celebrating no-dieting day, we could eat all that oily food and not feel guilty about it. I could even drink my brandy with Coke rather than TAB.



The entry fee to this glamorous occasion was that we had to wear some sort of hat to the dinner. So we called it the Silly Hat No-dieting Party. Some weird looking ones made their way to dinner. Some I have not seen before, with scary eyes and dirty curly hair-do's.

The evening turned out to be very loud and tasty, because we also had some sort of fruity cocktail punch. We were told there was no alcohol in it. I believed that, but later that night some one that never talks during the day couldn't stop talking. Maybe it was a sugar rush or something.



Anyway, the food was great with lots of oil, cheese and chocolate, and every kind of meat available to us, we even had some deep fried bacon wrapped cherries...yum.

Luckily I wasn't part of the cleaning party.





Making Yoghurt «

by Pieter

Met my ondervinding op die plaas met suiwel produkte, het ons besluit om yoghurt te maak. Easy Finest Kind Yoghurt het dit goed gevind om ons SANAE 52 groep te borg met yoghurt kultuur waarvan ons die yoghurt kan maak.

Na oorname, met omstandighede wat rustiger is, het ek die geleendheid aan gegryp om ons eerste vars yoghurt te maak. Maklik was dit toe nie. Lang lewe melk is nie die selfde as vars melk uit die koei se spene nie en ek moet by las dat ons nie die idiale omstandighede het vir so 'n projek nie.

Maar opgee gaan ons nie en die eerste 6L melk was in die vlekfreie staal pot om op gewarm te word. Die melk word verhit tot 40 grade celsius en die kultuur word dan bygevoeg by die melk. Die eenigste geskikte warm plek wat ek kon vind om die kultuur te laat broei was die generator kamer by die krag opwekkers.

Die eerste probeerslag was toe nie so suksesvol nie. Die plek wat ek gekies het om die yoghurt te laat broei was te warm. Weereens was ek nie vanplan om so vinnig moed op te gee nie en gou was die volgende pot aan die prit. Maar hierdie keer het ek 'n koeler plek gekies en ons eerste bruikbare yoghurt was in die yskas.

Vanuit die yoghurt het ons roomys en roomkaas gemaak. Ons bakker Grethe het vir ons 'n kaas koek gebak wat heerlik was. Rob het ook kaaskoek gebak daarvan en dit was ook smull lekker, 'n Paar van ons eet die yogurt saam met ontbyt pap en meusi, of drink dit sommer netso.

Soos die tyd verloop het en ek al hoe meer yoghurt gemaak het, het my vaardigheid toegeneem. Ons tuis gemaakte produk vergelyk goed teenoor die winkel produkte. Ons eksperimenteer nou met ons geure vir die yoghurt en dit lyk baie belowend. Ons het sover guava, aarbeï, vanilla en sjokolade geure gehad.

Dankie aan ons borg EASY FINEST KIND YOGURT vir hulle bydra. Ons pluk nou die vrugte van hulle vrygewigheid, hulp en bystand.



The Joy of Boiling Poo

by Craig

Unfortunately I dread the once a month blues where I have the exceptional privilege of boiling poo. No one believes this, but it takes the whole day of boiling poo to get a few results.

I start the day by collecting 6 samples from different positions in the water purification plant. My co-workers, especially the scientists, hate me on this day, because I tend to stink up the whole bottom corridor of A-block, right opposite their offices.

I test for ammonia and nitrates. I frequently test the water for pH, colour and ozone. This is an integral part of our survival. Should the water purification plant fail, we would not be able to discard of our human waste in this manner, and would have to take a poo in a bag for the rest of the year.

The testing is actually the fun part, one can act as if you are a real mad scientist trying to take over the world, but it is getting the samples that is the less fun part. One has to get a bucket and breathe in the lovely fresh odor of the previous weeks meals, lower it down into the tanks and extract a litre of each. I would welcome a total liquid diet,

or baby food, to alleviate the smells and sight of this sludge one has to work with as well as the occasional unidentified floating objects.

All my results get added to my monthly reports and is sent to the Public Works department, for further analysis. This is to recommend corrective actions if there should be something we missed.

So long from the land of happy poo, I shall see you again in one months time to relive the joy of boiling once again.





Kgmatso with the Scania giving it the go-ahead.

the machine by means of a Woodward actuator.

Since it is sometimes necessary to run more than one machine at a time, the synchronization and the other functions are controlled utilizing Gencon Pro controllers. As far as the principle of the Alternator is concerned the AVR(Automatic voltage regulator) is fed by two auxiliary windings located at the stator. When starting, the residual magnetism creates a current in the exciter armature. This current is full wave rectified by the rotating diodes and feeds the main field.

We have had some problems with one of the engines, but not to worry, we also have a backup generator. The Scania can be started within 15 min should something happen. We have tested it during heavy storms to see if the Scania can sustain the whole base and all its systems. I am very happy to say that it most definitely can!

So here at SANAE IV we have all the power we need, and if you take into account our polar diesel supplies, we have enough for 3 years.

The Gencon Pro and the main control screen where we can check water temperatures and system statuses

Power Generation

by Kgmatso

Here at SANAE IV our livelihoods depends upon generating enough power to keep our base warm, to melt snow for water and to keep all our necessary systems running.

The power generation is achieved with three ADE engines and they are connected to the Leroy Sommer Alternators. To generate a frequency of 50 Hz at the 4 pole alternator, the engines speed is controlled at 1500 rpm by means of a Woodward governor connected to the mechanical governor of



An ADE engine



Weather Stats for May:

Temperature

Minimum: -28.6°C (on 30/04)
 Average: -18.1°C
 Maximum: -5.1°C (on 07/04)

Pressure

Minimum: 862.2 hPa (on 03/04)
 Average: 882.4 hPa
 Maximum: 905.1 hPa (on 07/04)

Humidity

Minimum: 16% (on 10/04)
 Average: 70%
 Maximum: 91% (on 06/04)

Wind Gust

Maximum: 33.6m/s (on 03/04)

Average Daytime Length:

1 hour 42 min

Stats & Sponsors



HERON RIDGE



Special Thanks to:

A. Zięba
 G. Moriss



**Photo of the Month: See Above
 Taken by Phillip**

**Quote of the month:
 "It killed Michael Jackson, It must be good" - Rob during medical training**

**Movie of the month:
 Mission Impossible Ghost Protocol**

**Song of the month:
 M83 - Midnight City**

