QUIET STATION, BUSY SCIENTISTS AS CARGO SHIP PREPARES TO LEAVE BELGIUM



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This Sunday, I learned that Antarctica was in fact a very dry continent and how aerosols and particles were playing a role in that dryness. Ironically, that was in stark contrast with the recent news from the coast, where our friends were? getting massive amounts of snowfall? dumped on? them.

Remembering ?Queen Fabiola

Last Friday, we learned that Queen Fabiola had passed away. In sign of mourning, the ?B?elgian flag ?at the station ?has been? flying at half mast. It will stay that way for a few more days. After all, Princess Elisabeth is a little piece of Belgium in Antarctica?,? and we all wanted to pay our respects.

Bad weather at the coast ?delays ?progress?

We had news from the team at the coast yesterday?, and unfortunately the weather? has been quite a hassle. I ?t? ?has been snowing very heavily?. An entire day was lost ?for both for research?ers? and ?crew. Near white-out conditions make scientific work in the field impossible?, and repairs on one of our venerable

Prinoth tractors had to be postponed?. This morning, one scientist even woke up to discover that ?the entire inside of his tent? filled with snow ?overnight because of the wind.

Time is running short for the ICECON and BENEMELT ?scientists. They ?must soon?? leave their camp on the Derwael ?I?ce ?R?ise and move ?out close to the edge of ?the King Baudouin ?I?ce? ?Shelf?,? where they ? hope to drill a few 150 metr?e?-deep ?ice cores, weather permitting. Let's hope the weather will be better soon? so they can accomplish what they came for!?

Particles, aerosols and snowfall

Meanwhile at ?the ?Princess Elisabeth? station?, our meteorologists?,? Alexander Mangold and Quentin Laffineur from the Royal Meteorological Institute? of Belgium, spotted something unusual while monitoring aerosols in the upper atmosphere?: ?their instruments recorded a very sudden and sharp increase in the number of? particles ?in the atmosphere ?above Utsteinen?. At ?6?,?000 particles per cubic centimet?re, their concentrations were 20 times the usual amount? of ?particles in the atmosphere.

Alexander told me that? this increase had nothing to do with pollution?. He believes that it might have been triggered by turbulence in the upper layers of the atmosphere?,? where these particles are formed.

?P?articles and aerosols play a big role in Antarctica's climate?, so it's nothing to worry about.?? The?y? play a huge role in the formation of clouds. If there ?we?re no particles or aerosols? in the atmosphere that moisture ?could? adhere to, no droplets could form and there ?would be no clouds, precipitation ?or? snow.

In the ?austral ?summer, ?average concentrations of atmospheric particles ?average? around 300 particles per ?cubic centimetre. In the winter, concentrations drop to 10 or 12 ?particles per cubic centimetre? (even the best "clean room" laboratories with fancy air pumps and filters would struggle to get to such low levels? of particles?).

That's why, contrary to popular belief, Antarctica is a very dry continent, with very little ??snow?fall ?... except at the coast these days it seems ...