

## Logbook 8 (from 04/12/01)

There are still some white patches on the globe. And “our” floe is one of them, the object of some weeks packed with scientific research. It is an ephemeral piece of ice which will melt away some time after the last flag has been removed from its surface and stored in *Polarstern*'s big belly. But before that will happen, it will have changed its outlines like an amoeba or even undergo some cell division. That is nothing to be concerned about, evacuation via helicopter is a matter of routine.

Reaching our working spot, after having crossed sub-polar waters and thick layers of sea ice, was not the easiest part of the journey. Three or four floes that seemed to be suitable turned out to be too deep in the water (a result of heavy snow cover) or too rough on the surface. That's what *Polarstern*'s electronically equipped heli-scouts found out. Finally we detected a suitable floe – and ironically it was one we had already spotted at the very beginning of our search. *Polarstern*'s ice radar (in looks a little like green coloured pictures of the moon's surface) showed some flat areas: all meant to be designated areas for the various ISPOL-groups on board. All groups will be lined up at two vectors of a total of 6 km in length. But who will get which plot? It did not end up in a classic polar race such as that of Amundsen and Scott raising flags of victory and leaving victims in the snow. Instead there were rather simple questions to be answered: Who needs electricity from the ship, in other words, who should stay near the vessel? Who needs as much space as possible between his station and neighbouring ones, just to make sure that the generator exhaust does not intervene with the high tech-samples of air. Who needs the utmost distance to the sewage water that *Polarstern*'s bio-sewage plant discharges to the sea.

*Miles McPhee*, a renowned expert on turbulence (which effect does drifting ice have on the top layers of the water column?) would have loved to have one of the thin-ice-plots. But unfortunately he was in need of electricity from *Polarstern* to run his sophisticated instruments, and no thin ice was available all around the ship. Drilling and hammering through 2.30 meter of sea ice was a job for almost one and a half days. And when finally the task was done, there was a broad American smile of relief on *Mile*'s face. Victory at borehole *McPhee*!

Our home floe is teeming with red (the polar suits have an alarm colour) giant penguins: experts for ice algae, oceanographers, specialists of gas exchange between ocean and atmosphere, hunters in micrometer-scaled habitats. And above all the dome of an intensely blue sky, and

where it touches the horizon an almost unreal whitish shimmer is to be seen. The experts call it “albedo” – intense reflection of sun radiation.

Sometimes emperor penguins gather round the red giant penguins, stick their heads together and discuss what these aliens might be doing here. After a while they pay a visit to the next group, if it is not a snow mobile which attracts them, then it’s a helicopter. They learned in no time that helicopters are NFO’s (noisy flying objects), but not predators; they are as harmless as Snow Petrels.

It is a disturbing thought that we are walking like flies over milk skin, while 2000 meters of icy ocean lie beneath our feet. The floe is driven by the Weddell Gyre and the wind at a ground speed of about 0.3 knots per hour. But speed is relative – and according to our subjective perception the floe is an island and not something drifting from here to nowhere.