

ANT XXII/2

Weekly Report No. 2 (15.11. - 21.11.2004)

The new week started with helicopter flights over the ice covered ocean. A 3m long instrument was towed 20m below the craft to measure ice thickness over long distances by means of magnetic induction. This exercise was repeated regularly while in the meantime, the first coring teams were also discharged onto the ice, monitoring larger scale variability of sea ice organisms along the cruise track. The ship stopped for few hours at a stable ice flow on Tuesday to rearrange some containers, which could be safely dispatched on the ice floe. This time slot was also used to gain some additional ice cores. Two emperor penguins were attracted by our activities and approached the scientists up to a distance of only a few meters.

During the middle of the week, the temperatures dropped to  $-10^{\circ}\text{C}$ , but only to rise again to temperatures around the freezing point for the remaining. Our small swimming pool served as a testing and training basin for the divers. They practiced the handling of underwater gear to be used when diving underneath the ice floes. They were monitored by a remote operated vehicle which gave an outstanding performance with controlled manoeuvres and brilliant video pictures of the divers.

On Friday, the CTD-rosette (Conductivity, Temperature, Depth) was lowered to the sea floor at 4760m at a station which has been monitored for decades. This instrument continuously measures the salinity and temperature profile over depth

and collects water samples from preselected depths for further analysis. The trend of rising temperatures of the Weddell Sea Bottom Water could not be confirmed. At least this year the temperatures were at the same level as in 1996 and 1998 with an accuracy of a few thousands of a centigrade.

Our regular morning sessions with reports of the different working groups have changed to meetings to coordinate the investigations on the ice floe to be selected soon. Regular visits to the bridge were rewarded with the sighting of individual emperor penguins and regular encounters with crabeater seals, sleeping or resting on the ice. They just raise their heads when „Polarstern“ passes. In the water itself, Minke whales were regularly observed and on Friday some Orkas surfaced close to the ship.

In the meantime we were hit by a second gale with wind strength up to 10. However, our position within the drift ice made it possible that the storm passed almost unnoticed and therefore all passengers are well.

With best regards from further South.

In the name of all expedition members

Michael Spindler