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We now spend our fourth Sunday at sea. After crossing the Gulf of Biscay we passed the Isle d'Ouessant at the NW corner of France and continue our journey in the English Channel. Soon we expect to be within cell phone reach from shore. It will enable us to get in touch with home at more reasonable conditions than through the satellite supported telephone systems in the open ocean.

During the past week we finished the continuous recordings of the bathymetry (Hydrosweep) and of currents in the upper water column (ADCP). Last Wednesday, 15-Jun-2005, we visited Sta KIEL276 where a final CTD station on 5300 m water depth was taken. At this site the Leibniz Institute of Marine Sciences (formally Institut für Meereskunde) maintains moored current meters since 1981. To our knowledge, this is one and only station in the open ocean with the longest record of its kind worldwide. Last time FS POSEIDON exchanged the recording instruments seven weeks ago. It was the 25th recovery with subsequent re-deployment of the mooring in our deep-sea observatory which is situated nominally at 33° N, 22° W or about 250 nautical miles west of Madeira.

The figure shows the distribution of salinity and temperature (1200 – 2000 dbar only) at Site KIEL276. Note the step-like structures beneath 1200 dbar. They are caused by molecular exchange processes in the water column. The associated phenomenon of "salt fingers" was a topical research subject in the oceanographic community thirty years ago. These steps were discovered for the first time with the availability of electronic CTD probes that measure continuously through the whole water column. They replaced the hydrographic series, in common use until then.

We all look forward to see land soon and to travel home. We would like to thank Kapitän Pahl and his entire crew for the excellent co-operation and support during the cruise. We also thank the Alfred-Wegener-Institut for the opportunity to use the vessel for our work in the Vema Channel. The project is supported by BMBF in the frame of CLIVAR marine-2.

Best wishes in the name all on board,
Walter Zenk
Principal Scientist