

Weekly report 12.08.2019-18.08.2019 SO269 SOCLIS

The second week at sea has passed quickly, as the stations have been carried out at regular intervals along the sections L5, L6 and L2. Hydrographic data was collected by CTD at all planned stations, followed by sampling for biological and chemical analysis. Thanks to good hydroacoustic measurements along the route, we were able to pull short and long cores at selected positions, which not only give us information about the geological past, but also allow us to investigate the development of anthropogenic stress.

On 14.08 in the morning, we reached the position where our contamination-free mooring was to be laid out. At this time, the sea was quite high, so that after consultation with our meteorologist and the captain we shifted the mooring work to the afternoon, and spent the morning with last preparations. At 15:14 board time or 07:14 UTC the weight was dropped and we observed the behaviour of the individual buoyancy packages and the head buoy. 10 minutes later, the buoy submerged and we started with the determination of the anchorage position. Our mooring contains a nitrate sensor, two acoustic current meters with CTD and fluorometer, a double sediment trap with 40 cups, as well as a double trigger. The head buoy and the buoyancy bodies distributed over the 1400 m length should keep the measuring chain upright up to a current of 1m/s. The buoy is equipped with a double releaser. The anchorage will collect data and samples over the next two years, and we hope that it will survive the time without damage in this area of intensive fishing.

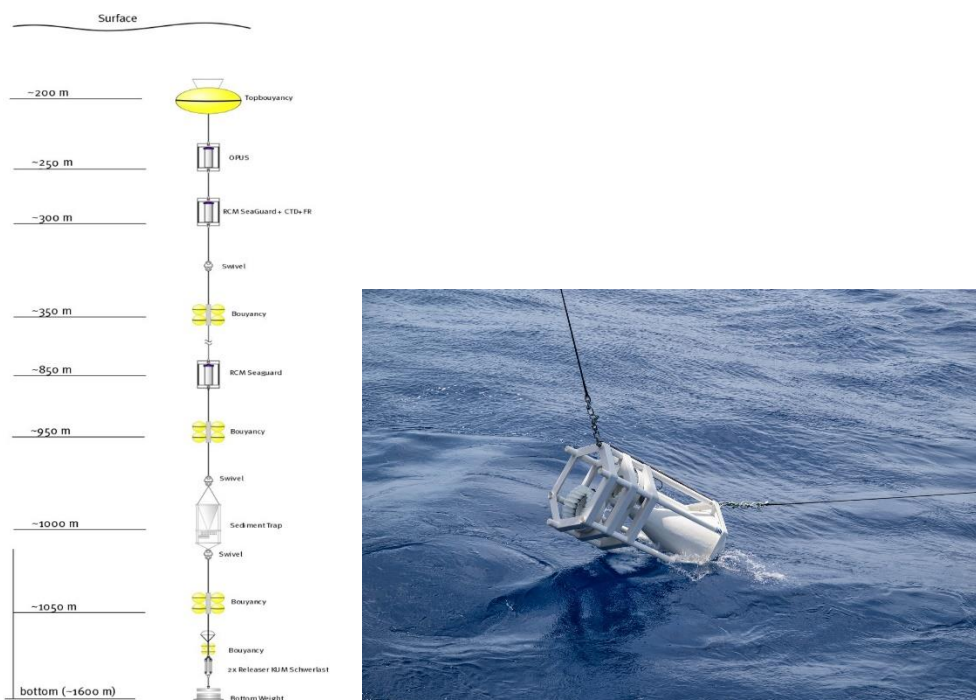


Fig. 1. Mooring scheme (left) and sediment trap being lay out (right). Photo R. Prien (IOW).

Afterwards we continued our station work on our central section L2 in the deepest part of our working area (3500m) towards the coast before the mouth of the Pearl River. The first analyses of the hydrographic data show that we have found water from the Pearl River estuary at all sections L1, L4, L5, L6, and also L2 at the northernmost stations, which is characterised by low salinity, high nutrient values, chlorophyll a and turbidity values. At the coastal stations we can already clearly see the influence of the Pearl River, as we have, for example, two chlorophyll a maxima: at the surface in the mixed water and in the deeper water column the seasonal chlorophyll a maximum. In between, in the nutrient-poor water column, the concentration quickly decreases to background values.

Our work progresses smoothly and without delays of any kind. The weather and the sea conditions were favourable during the reporting week, with weak winds and only a slight swell we made good progress. Occasional showers and passing weather fronts showed us how fast the weather changes under the influence of the monsoon. The atmosphere on board is good, the cooperation between the German and Chinese colleagues runs smoothly, and the good cooperation with the ship's management and the crew ensures a good relaxed working atmosphere on board.

We extend our warmest greetings to everyone on board the SONNE, on behalf of the expedition participants. Joanna Waniek

Prof. Dr. Joanna Waniek

Leibniz Institute for Baltic Sea Research, Warnemuende