

„Recover and Return“



5th Weekly Report, 02.11.–08.11., 001° 50.562'W – 50° 01.657'N
MSM96 (GPF20-3_088), 10.10.2020 – 10.11.2020, Emden – Emden

The fifth week of our cruise was dominated by the finalization of work and the coordination of the recovery of the PAP ODAS buoy. Following a general enquiry by British colleagues from National Oceanography Centre (NOC) to recover this scientific equipment, it had become clear that we could create an opportunity to finish work in the southern “Iberian Abyssal Plain” (IAP) working area, then transit back north to pick up the torn-off buoy as well as complete the previously interrupted work in the northern “Porcupine Abyssal Plain” (PAP) area.

We continued the multicorer and CTD sampling in the IAP area until noon of November 2nd, then began our transit back north. All required maps and samples had been acquired in the southern work area - except for the image data of course as the OFOS work had been abandoned the week before. In total we collected twelve multicorers in the IAP area, completing the set of four samples per each of the three topography types (hill, plain, valley). Two of each serve as the local replicate to assess variability at 100m scale.

On the way north, we added one lonely MUC sample in between the southern IAP and northern PAP area. This cannot replace our originally intended third work area, but hopefully can contribute additional information on cross-basin variability. The sample from this site at least does look very different at first glance (Figure 1). Detailed results will follow after the lab analyses. We then continued the transit for an additional day and a half north towards the ODAS buoy.



Figure 1: Sediment samples from different depths in the core (top to bottom: left to right in the photo) from three work areas (North to South: top to bottom in the photo, the intermediate station in the middle). Photo by Timm Schoening

We had spent the past days rapidly exchanging messages between the NOC, the German Research Vessel Control Center and the vessel to discuss recovery logistics. It then became obvious that the buoy would drift into Irish national waters, where we were not allowed to pick it up. Due to a tremendous effort by the Vessel Control center, the Foreign Office, the German Embassy in Ireland, the Irish Foreign Ministry and the Irish Marine Institute a diplomatic clearance to pick up the buoy was issued within one day! A truly outstanding achievement. It shows how incredibly good the international cooperation can be.

Following the recovery, we continued the interrupted work in the PAP area. We were still lacking two multicorers to complete the set of twelve as well as a complete CTD cast with an oxygen profile down to the seafloor. These samples were successfully taken until the evening of November 6th. We spent the remaining hours dedicated for scientific work with mapping the outskirts of the PAP area back towards the Irish EEZ. On November 10th at 10:30 am we finally left international waters and concluded the scientific program of MSM96. Since then

we have started packing and cleaning as well as organizing and sharing data. We will arrive back in Emden on Tuesday morning. This time, it will be a quick trip back home, rather than a flight around the world and also our samples will arrive in Bremen and Kiel on the 11th of November. We are eager to analyze the samples and to continue to process the data. This cruise is over, but the project is far from it. Now the challenge is to publish the quality-controlled data as quickly as promised and to provide the geochemical lab analyses to begin the machine learning predictions based on samples and hydro-acoustics. We look forward to it!

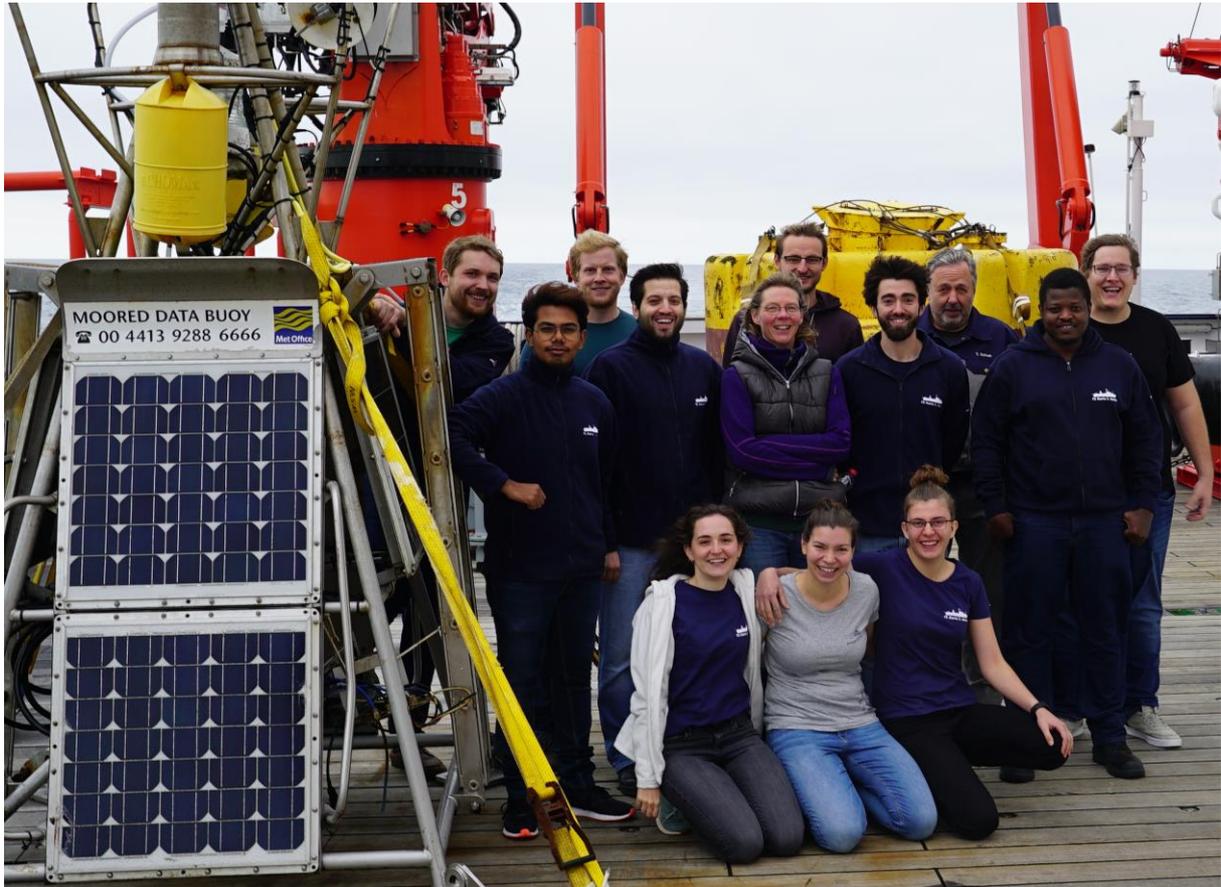


Figure 2: The science team of cruise MSM96 next to and in front of the disassembled PAP ODAS buoy.

Greetings on behalf of the cruise participants,

Dr. Timm Schoening
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