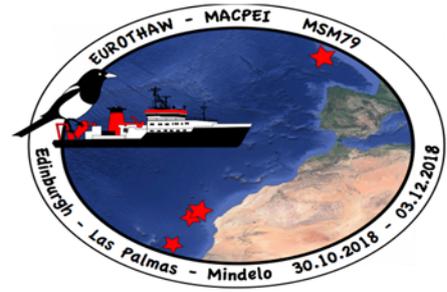


FS Maria S. Merian, Cruise MSM 79

Weekly Report 5

**Edinburgh (UK) - Las Palmas (Gran Canaria, ES) -
Mindelo (Kap Verde)
30.10.2018 - 09.11.2018 - 03.12.18**



The beautiful weather that accompanied us the last few weeks, continued during our last research week. Blue skies, little wind and a low swell created optimal working conditions. To the great delight of our Dutch team, the sky was finally covered by a thin layer of dust in the second half of the week. This dust was transported from the Sahara into our work area. In addition to the dust collected with the dust buoys "Carmen" (Weekly Report 2) and "Laura" (see below) finally plenty of dust could be collected now with the two collectors that were positioned at the Peildeck throughout Leg 2.

The last week of research started with a transit from the upwelling area off Cape Blanc in a southerly direction to a research area southeast of the Cape Verde Islands. The air and water temperatures rose rapidly as soon as we left the upwelling region and crossed the 20 ° N latitude. During the night from Wednesday to Thursday, we reached the last research area on our journey.



Boie Laura by night

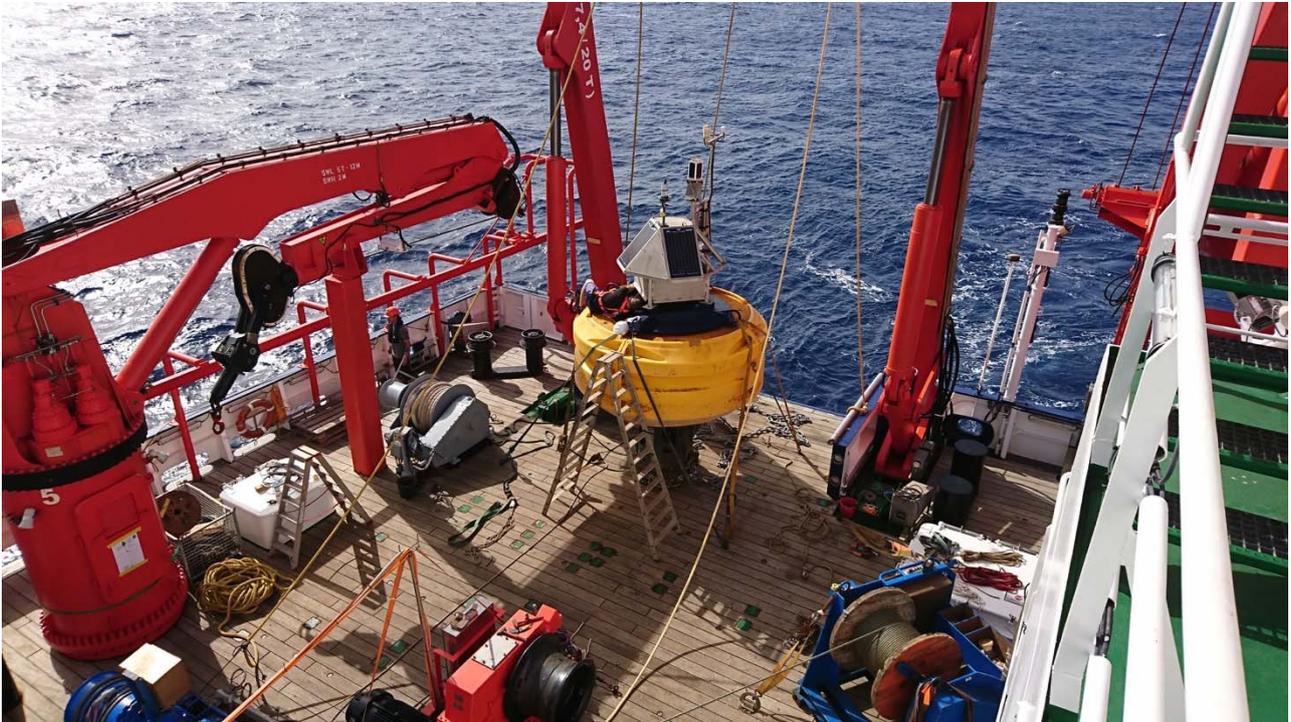
In this area, the water depth is over 5000 m and here another dust buoy ("Laura"), a mooring with sediment traps and a test mooring of the Royal Netherlands Institute of Sea Research were to be found. Our task in this area was to recover, clean, service and redeploy buoys and moorings. The station work began in the late hours with the search for Laura. This turned out to be uncomplicated, as with its brightly shining flash light, the buoy could be clearly recognized on the horizon already at the distance of 6 nm.

On the morning of November 29, the dust buoy was successfully recovered. Subsequently, the transit to the position of the 15 nm distant sediment trap mooring M1 was started. The release mechanism of M1 worked flawlessly, and by late noon, the three sediment traps of the mooring were secured on deck. Each of these traps had collected material over a period of three months with collecting bottles being changed every four days. Both dust buoy and sediment traps worked well, despite some damage to the buoy, which might have been caused by fishermen trying to use the buoy as anchorage. During the night, the water column was examined for the last time on this expedition by CTD, and plankton, archaea, bacteria and suspended organic particles from the water column were collected with in-situ pumps.

The next morning was used to recover a "test mooring", to replace and relocate a part of its anchoring cable and redeploy the mooring again. Our colleagues from the NIOZ test the load limit and the tensile strength of new types of mooring cables in deep water. In the

afternoon, the now freshly maintained M1 anchorage was redeployed for another year of collection.

Our research work was successfully completed with the re-launch of the now clean and maintained dust buoy Laura on early Saturday afternoon. Directly afterwards the Maria S. Merian headed to Mindelo, which we want to reach on Monday morning.



Buoy Laura almost ready to be deployed again

Hereby, I take this opportunity to thank the fantastic crew of Maria S. Merian and the Leitstelle für Deutsche Forschungsschiffe for their support. We felt very comfortable on board. The excellent cooperation between the ship's crew and the German, Dutch, English and French scientists has contributed significantly to the success of this journey. All research goals could be achieved.

Zeer veel hartelijke groeten van de Atlantische Oceaan tussen de Kaapverdische Eilanden.

Karin Zonneveld
and participants of MSM 79