

## 1. Wochenbericht (29. Juni - 1. Juli 2018)

M148/2 „EreBUS“ 01.07.2018 (Walvis Bay, Namibia) -  
20.07.218 (Las Palmas, Spain)

On Friday the first group of 13 scientific members of the M148/2 EreBUS transit expedition along the Namibian shelf, continental margin and into the tropical South Atlantic Ocean arrived in Walvis Bay to begin unloading containers and setting up laboratories on the R/V Meteor.



The Meteor Expedition M148/2 “EreBUS” aims to investigate the microbial processes producing and consuming the trace green-house gases (TGG) methane and nitrous oxide in the Benguela Upwelling System (BUS) and physical and geochemical controls regulating these processes.

We will use the transit from Walvis Bay to Las Palmas to sample the water column and surface sediments on the Namibian shelf and across the continental margin at 18°S into deep water, and continue sampling the upper 500 m of the water column on a transect through the Angola Gyre. We will identify microbial communities contributing to TGG turnover at key water and surface sediment depths, and explore the metabolic capacities of these microorganisms with state-of-art cultivation and genomic techniques. The contribution of symbiotic microorganisms living with small eukaryotes will be investigated. Hydrographic and optical properties will be gathered in support of the experiments. We will measure primary productivity and nitrogen fixation as well as determine the trace metal availability and fluxes that may regulate key enzymatic processes. The source and fate of dissolved organic matter compounds will be investigated in order to understand their impact on microbial respiration.

On Saturday evening, together with the Captain and Crew of the R/V Meteor, and organized by the German Embassy in Windhoek, we welcomed guests from national and local governments, media and non-governmental agencies in Namibia to a reception onboard the ship. The scientific background and goals of the expedition were shortly presented, and a tour of the ship was organized. Enthusiasm and interest in the ship and the science were clearly palpable in the lively discussions over the subsequent buffet dinner.

On Sunday morning the remaining scientists joined with the colleagues already in Namibia to board the ship. Unfortunately, due to illness, one of our Namibian colleagues had to cancel his participation. But otherwise, all are well and busy setting up laboratories and preparing for leaving port tomorrow morning. Our first station is only a couple of hours outside of Walvis Bay, so we will be working late to get started.

We are waiting for one box of scientific equipment, but then hope to sail by late morning. The weather forecast is a bit daunting, with high winds forecast for tomorrow combined with swell out of the Antarctic. Nevertheless, we are cautiously optimistic with our plans and look forward to get out to sea.

Greetings from Walvis Bay, Namibia from Tim Ferdelman, Chief Scientist, on behalf of the scientists and crew