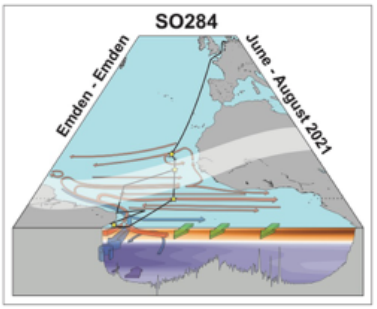
R/V SONNE
SO284 "Mooring Rescue"



Emden - Emden, 27.06. - 17.08.2021

1st WEEKLY REPORT

27.06. - 04.07.2021

Mooring Rescue the second!

On the 27th of June we left Emden with the R/V Sonne and are now on our way to Brazil. An exciting campaign of 51 days with a total of over 10,000 nautical miles lies ahead of us. As the name of our campaign, Mooring Rescue, suggests, a central goal of our campaign is to rescue moorings in the tropical Atlantic, i.e. to recover the old moorings and redeploy them with new instruments. The data collected by these moorings make an important contribution to record the oceanic circulation and water properties in the tropical Atlantic and to document their changes over a long period of time. Due to the Covid Pandemic, our planned research and especially the recovery of the moorings had to be postponed repeatedly until the time has finally come. During our cruise we will mainly focus on moorings in the central and western Atlantic off the coast of Brazil, after having successfully recovered and redeployed moorings in the South Atlantic off the coast of Africa during the previous cruise (SO283). In addition to the mooring work, we will carry out oceanographic and meteorological measurements across the equator to address a number of scientific questions. These include convective cloud formation in the tropics, mixing processes in the upper ocean, circulation at the equator and at the western boundary off Brazil.

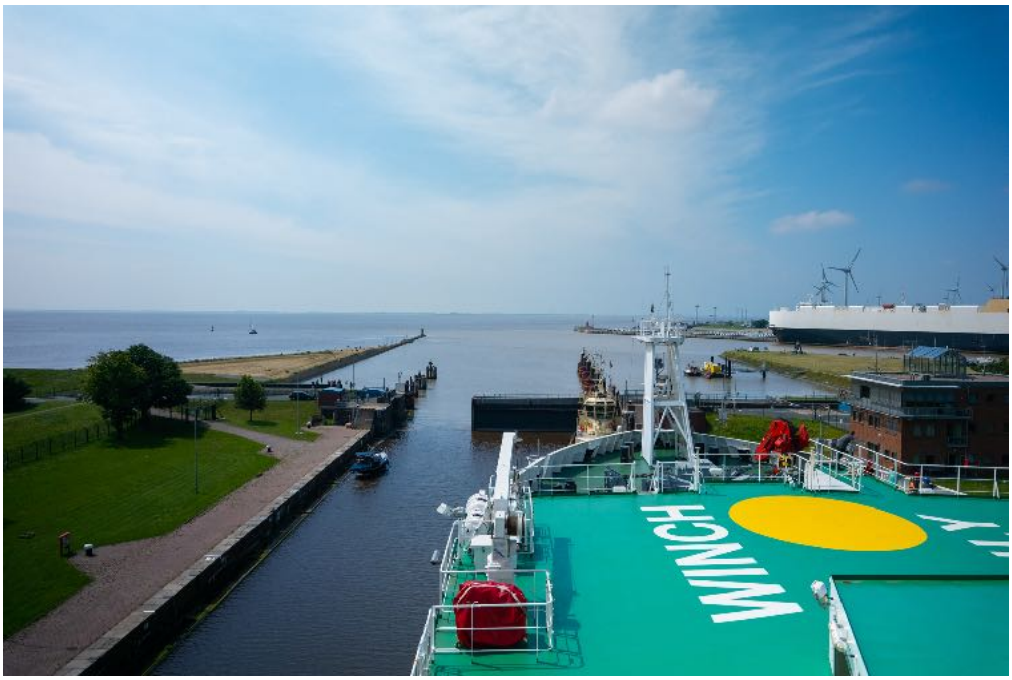


Fig. 1: Passing the lock in Emden as the beginning of our journey in the Atlantic (© GEOMAR/David Menzel).

Not only our research program was affected by the current pandemic but also the start of our cruise. To keep the risk of infection on board as low as possible, all cruise participants spent ten days in a quarantine hotel near Oldenburg. At first it was a strange feeling to enter a room that could not be left for the next ten days, but in the end the time passed quite fast thanks to the scientific, sportive and musical program. We would therefore like to take this opportunity to thank the hotel, the shipping company BRIESE and the German Research Fleet Coordination Centre for the good and friendly service.

Even though the time in quarantine felt surprisingly short, our joy about our final departure to R/V SONNE in Emden was great. Many of us had been working towards this moment for months and could hardly wait to finally board the ship on June 26th. After everything had been properly stowed on board over the next 24 hours, we set sail on the 27th of June at 12:30 p.m. and made our way south. Our way led us first through the English Channel, then along the coast of Brittany and through the Bay of Biscay until we could see the island of Madeira in the distance yesterday morning. We will reach our first big stop, the mooring off the Cape Verde island of São Vicente, in a few days.

We are using the time until then to prepare ourselves and our instruments on board. While the working deck and the laboratories seemed empty and deserted at the beginning of our cruise, this has changed significantly in the last few days. By now, all instruments are installed and we could already collect a first profile of the atmosphere - with the help of a radiosonde - and a first profile of the ocean - with the help of a CTD. Both went well, which is an important first step for us for the measurements in the coming weeks.

Fig. 2: Successful radiosonde launch from the working deck of R/V SONNE (© TROPOS/Ronny Engelmann).

Besides the scientific preparations, all participants of the cruise have settled into the life on board. A very important contribution to quickly feel comfortable in the new and for some also very unfamiliar environment has been the always friendly and helpful nature of the crew. We are extremely grateful for this and look forward to our time together in the coming weeks. All are well and we send our greetings to those who stayed at home!

At sea, 04.07.2021

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Chief Scientists SO-284