



Angola - successful station finale

On the way to the mooring station off the coast of Angola we deployed another ARGO float for the BSH in the afternoon of May 02. For this purpose, we shortly stopped the ship and after less than three minutes the float was already floating in the Atlantic Ocean and will provide us with a wealth of data for the next years.

On the morning of 03.05.2021, a memorable date, with a few CTD stations before, we then arrived at the last mooring on this cruise: KPO-1215 belonging to GEOMAR. So far, the recoveries of the mooring systems went more or less smoothly, at least all systems were still active and could be recovered. Would it be the same again here? The hydrophone went into the water at 06:30 shipboard time, the correct codes were set and then we listened to the replies. And yes, the acoustic triggers were still alive and transmitting their distance to the ship. All parameters matched, so this system was also cleared for release. A short time later, the message came from the bridge: Flotation modules sighted. One by one, the individual modules came to the surface. The ship slowly approached the head buoy and at 07:20 the system was hooked. Now everything proceeded according to a well-rehearsed choreography. All modules, all sensors, all instruments were pulled on deck step by step, until at 08:20 it was announced: all on deck, end of station. With this it was clear that *SO283 Mooring Rescue* can be classified as a complete success. All systems, for which we had taken this long and long journey to rescue them, could be recovered. No system had to be left behind.



An ADCP with buoyancy body and other sensors are recovered and returned to the deck (© Universität Hamburg/Niko Lahajnar).

After recovery, the day was spent overhauling the system. Numerous other CTD stations followed in short intervals until a few nautical miles away from the coast of Angola. Until deep into the night, one profile after the next was taken until we were back in the morning at the same mooring position as the day before. On 04.05.21 we started the re-deployment of the mooring from

GEOMAR. At 06:20 shipboard time the command came: On station! Under good weather conditions, the modules were successively lowered into the water until the ship was able to pull the system behind it like a string of pearls. After an hour and 20 minutes, the command came from the bridge for the last time on this voyage: Position reached, anchor can be dropped. A short time later, two railroad wheels were dropped into the depths of the Atlantic, dragging all the modules along with them. Mooring KPO-1235 was soon back in almost exactly the same position as KPO-1215.

Still in the morning, a last BIO-ARGO float was deployed at 11°00'S 12°45'E for a French research institute. The last stop on this voyage was then scheduled for the night of 05.05. In the central part of the so-called Angola Dome close to 10°S and 10°E, whose water masses have a large influence on the northern Benguela upwelling area, CTD data and water samples were taken once again, plankton nets were run and underway data were recorded. Again, everything went well and smoothly. Then at dawn on 05.05 our last station, appropriately station #100 was to conclude this cruise: BSH's last ARGO float was to be launched briefly. And as if it were yet another great reminder that nothing should be taken for granted on research cruises, the ARGO float simply would not connect to the satellite. Various attempts failed, so after almost two hours the station had to be aborted. Was the very last station really going to be our first failure? Countless e-mails were written back and forth with the operators and various attempts were made to restart the float. At first, all attempts were unsuccessful. It was not until new codes were sent directly to the instrument by satellite from the manufacturer the next morning that the float woke up correctly and was ready to measure. Within a few minutes the SONNE reduced her speed and the float was handed over to the Atlantic. Thus, after exactly #101 stations, the station work ended 100% successful after all.



On the last station of SO283 an ARGO float is released (© Universität Hamburg /Niko Lahajnar).

After the last station it was time to head for home. Ahead of us are now about 5,550 nautical miles or more than 14 days of transit. But this time will be used profitably on board. There are enough data and samples that still have to be evaluated and processed.

On board, everyone is well and greets those at home.

At sea, 09.05.2021

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