

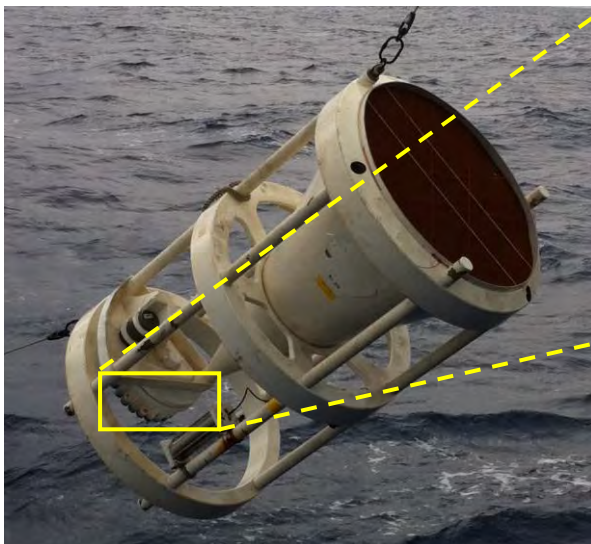
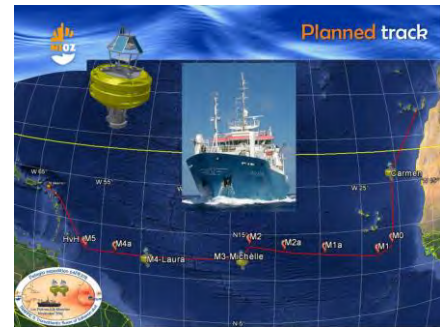
On board Research Vessel *Pelagia* in the equatorial North Atlantic, Saturday 23 November 2013

Dear all,

Time flies when you're having fun, and so we hardly noticed that it has already been two weeks since we left Las Palmas! A LOT has happened since the last weekly update, where we were still to arrive at station M1 (see map →)

Once at M1 we recovered the mooring with two sediment traps. This was a very exciting moment as we would find out if they had indeed been collecting material over the past year.

As the first trap submerged, it was immediately clear that all beakers in the trap contained some material: hurray! However, just after also the lower trap was in sight in the water, we heard a loud snap and saw the cable hanging loose: thanks to the large swell the ship had made an upward movement that exerted just too much stress on the cable and it broke at the titanium bar inside the sediment trap.... This was a little disaster since not only our collection of last year's sediments was now gone, we would also not be able to re-deploy it to continue collecting during the upcoming year!



The very first sediment trap has successfully been sampling all material settling through the equatorial North Atlantic Ocean at station M1 from October 2012 until November 2013. The blow up shows that there is considerable material in each and every bottle!

Station M1 clearly was not our lucky station; despite the beautiful multi-core we had collected at this spot last year, we did not manage to get a long core from this position using the piston corer.

Things got LOTS better at the next station though; because of time issues we merged stations M1a and M2a in the middle of their positions and here we managed to get a 9.54m long sediment core! After opening this core, it not only turned out to be a long one but also a beauty; very nice alternations of sediment packages characterised by laminated orange-brownish (dust!) colours with homogeneous olive-green sections throughout the whole core.



A picture of the freshly-opened core section which clearly shows the colouration of the sediments varying from orange-brown to dark green. A beauty!

Currently, Esmee, Ronald, and Brett are scanning this core using the XRF scanner. We have good hopes that already these first bulk-chemical results provide a first impression of the stratigraphy of this core.

The next stop was station M2, just east of the mid-Atlantic ridge at about 14°N, which we reached on Friday 21 November. Here, we again had to first recover the mooring we had deployed in October 2012, before re-deploying it. Because of this re-deployment, we had to get water from the trap depths (1200 and 3500m, respectively) first using the CTD rosette sampler. Despite the still relatively large swell, this recovery went very smooth: both traps could be retrieved and stored safely on deck!

Then bad luck struck again: while re-deploying the mooring at M2, just after the upper sediment trap had submerged, a socket of one of the brand-new cables broke! Fortunately no one was hit by the sweeping cable and because a mooring is always deployed “starting from the top”, the material could be retrieved. However, this retrieval had to be done starting with the upper smarties and after another socket of the new cable broke, another sediment trap went into the deep, never to be seen again.... Also this time, things could have been much worse and no one was hurt by the cables flipping around: count your blessings!

Logically, our trust in the new cable was completely gone and we decided to re-use last year's cable that we had just recovered with the mooring. We spent the evening and night at the site, preparing for the re-deployment of this mooring as well as fishing-for-plankton with the multinet. Like the new mooring at M1 also the mooring at M2 now has one sediment trap less than the original. This deployment went very smooth again and we managed to drop the anchor precisely at the spot where the original M2 mooring stood.

Currently, we are waiting for the piston corer to come up from 5200m below our ship, and which hopefully provides us with another beautiful tube of mud. Bets are currently being placed on how long it will be....

So far, this cruise has been a mixture of great successes, some bad luck, and many creative solutions by a great team. Successes are celebrated and mishap soon forgotten. Although there is considerable swell, the sea is relatively calm and the weather is pleasant —the air temperature reached a maximum of 39°C in the sun today, 26°C in the shade— excellent conditions for a good mood!

Many greetings to all of you from the Pelagia in the equatorial North Atlantic!
On behalf of the ship's- and scientific crew,
Jan-Berend Stuut



For more info on our cruise, please have a look at www.stuut.tv/html/pe378.html.
In addition, you can read a ship's diary, kept by all the participants onboard the ship on the nioz website at: www.nioz.nl/scheepsjournaal.

Our journalist Ronald Veldhuizen writes a liveblog on the Volkskrant site: www.volkskrant.nl/vk/nl/12587/Ware-Wetenschap/article/detail/3542625/2013/11/11/Liveblog-de-reis-van-Jan-Berend-Stuut-naar-het-woestijnstof.dhtml

Finally, Ronald also writes a series for the VPRO series Wetenschap24 at: www.wetenschap24.nl/nieuws/artikelen/2013/november/Geboeid-door-stof.html