

On board Research Vessel *Meteor* in the equatorial North Atlantic, Sunday 14 October 2012

Dear all,

Almost two weeks have passed since we left Las Palmas and so far, things have been going really well! To start with, until today we have had really favourable winds, causing the ship to sail much faster than anticipated (up to 12.7 instead of 10.5 knots!), which provides a lot of slack in the program. Time and again we arrived much earlier at the stations than planned, giving us the opportunity to spend more time on mapping the different study areas using the vessel's multi-beam system and thus to locate the best spot to deploy the moorings.

In addition to coming from a favourable direction, the winds also carried a LOT of dust, which was completely unexpected as "the dust season" usually does not start until November/December. However, already on the 4th of October reports came from Mindelo, Cape Verde speaking of reduced visibility due to atmospheric dust. Later, a huge dust outbreak on the border of Mauritania and Western Sahara on 8 October made sure that the air around the ship was loaded with dust almost continuously for a week. This is really the best scenario we could have imagined, as the dust is obviously the main reason why we are here. With the two dust samplers that are located on the deck above the aerosol lab on top of *Meteor*'s bridge, we have been able to collect a lot of material along the transect we are sailing. These samples provide us with the opportunity to already start studying downwind dispersal gradients in the dust, which is exactly the goal of our mooring transect. In addition, at mooring stations where we usually stay for about 12 hours, the ship is always orientated facing the wind so that at stations M2 and M3 we collected beautiful samples at single locations.

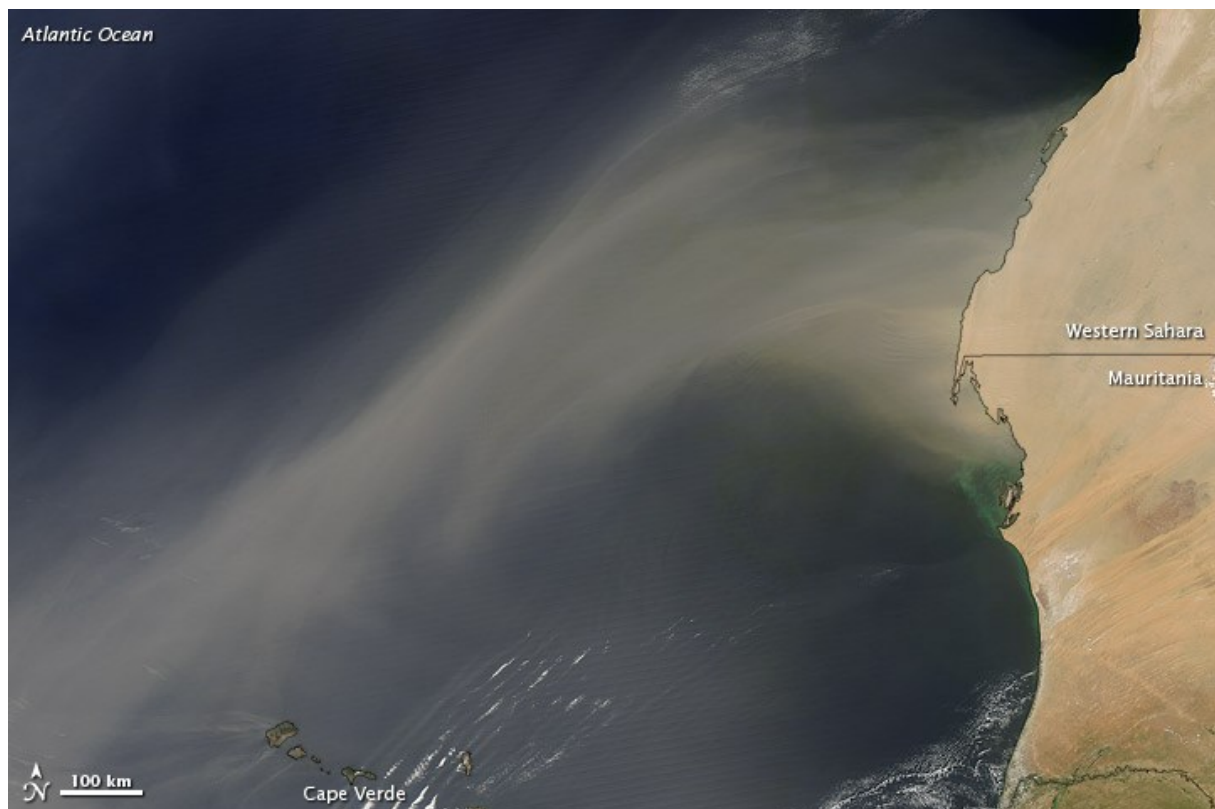
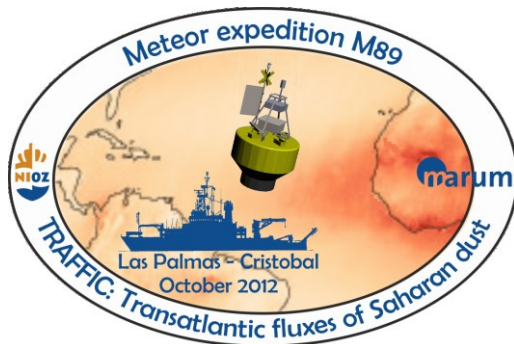


Figure 1) satellite image (courtesy of NASA's visibleearth website) showing how a huge amount of dust is entrained into the atmosphere and blow towards the West and Southwest, right in the direction where we were sailing. Our estimated position at this moment was just Southwest of the Cape Verdian islands.

The weather has been extremely nice as well and although the DWD (German Meteorological Survey) representatives warn us every day that rain showers may occur this close to the ITCZ (InterTropical Convergence Zone, the region where winds from northern and southern hemispheres meet), so far we have been enjoying the sun –minimally obscured by Saharan dust— and tropical temperatures most of the time. Also the two meteorology students from Hamburg are quite pleased with these favourable weather conditions; both cloud- and aerosol observations are going very well.

Further, the deployments of the three moorings and all the rest of the water- and sediment collections at the stations so far have been very successful. This is mostly the effect of the very pleasant working environment resulting from the very smooth collaboration between the scientific and ship's crew both on deck as well as on the bridge. A special remark should be made for station M3 where the mooring landed less than 10 meters from its intended position; an absolutely fabulous achievement given the water depth of about 5km!

The kitchen- and support staff keep treating us very well. As an example of how we are spoiled please have a look at this picture showing Yvo standing next to the buffet of fresh fruits and salads, and you will understand why he is looking so happy.



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

For daily updates about our cruise, please have a look at www.stuut.tv/html/jbatsea.html The blog can be read both in Dutch and English. A German version is made available on the MARUM website at: www.marum.de/Expeditions-Logbuecher.html