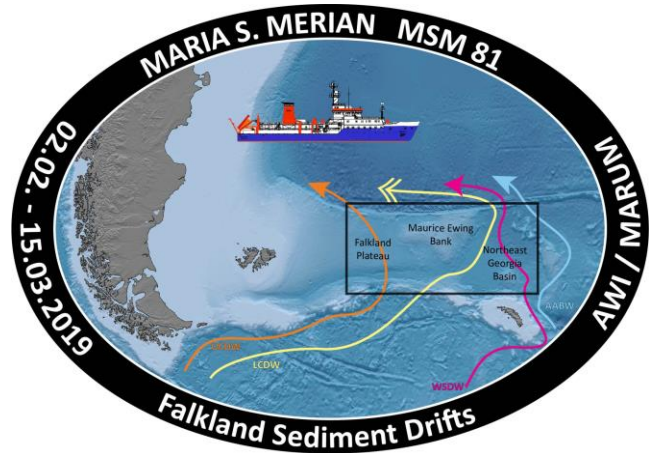


Expedition MSM 81 Valparaíso - Montevideo

Weekly report No 4 25 February – 3 March 2019



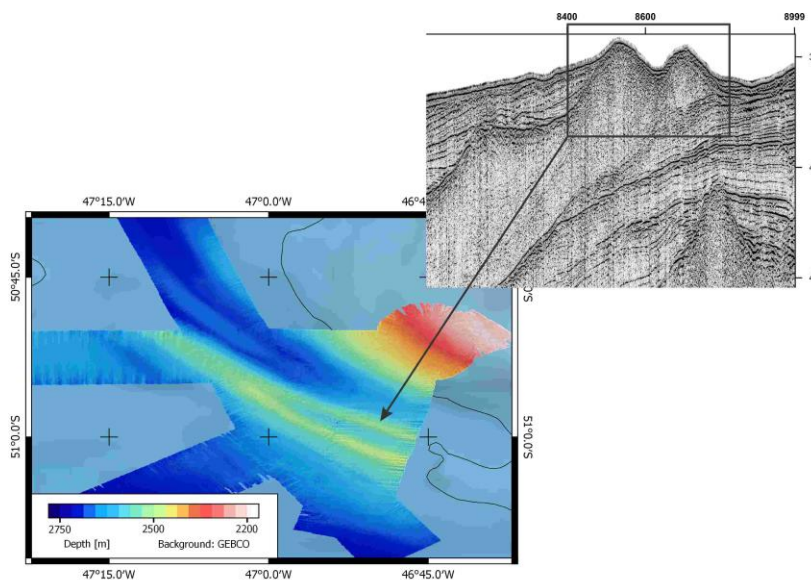
We have been at sea for four weeks now, nearly three of these in our working area. Our equipment has shown no problems, we only had to change two buoys and tighten a few shakles. But yesterday at lunch time the moment had come – one of our airguns ‘blew’ off! This means that the seismic source released pressurised air, which is needed to generate the seismic pulses. As usual this was not an ideal moment for repairs – we were close to the location of a sediment core. There, we know the age of the sediment at the seafloor. But after such a long time and steady signal generation we may tolerate if the break-down of an airgun. 18 days of continuous work – that is a new record! Especially considering weather conditions. We thus collected seismic data across the core location with only three airguns and then retrieved the seismic sources for repairs.



(Foto: G. Uenzelmann-Neben)

Wind and waves still hold a tight grip on us. We have come across only few days with less than 6 bft and waves lower than 3 m. It has become a second nature for every participant to hold onto plates and glasses during meals, because the vessel can roll heavily any moment. Nothing is put down careless without lashing, in the labs the participants hold onto the table to avoid a journey across the room on the chairs. Doors are being closed carefully after passing. Temperatures are between 1 and 5 °C, and this is called the height of Summer! We suspect that the sale of T-shirts,

short, and sandals on the Falkland Island is not great. We all have reacted quite enviously to reports of sunshine and 18 °C from Germany. There it is supposed to be Winter!



There are not only reflection seismologists on board. We also collect data to image the morphology of the seafloor. This information is necessary to evaluate whether structures images in seismic data are small- or rather large-scale features. The figures show two hills in the seismic profile, which the bathymetry data then identify as ridge-type structures.

Cheerful greeting from all participants.

Southwestern Atlantic, March 3rd 2019, 49° 50.374' S / 42° 33.532' W

Gabriele Uenzelmann-Neben

<https://www.awi.de/en/science/geosciences/geophysics/research-focus/gateways-of-the-southern-ocean.html> under *Effect of opening of Drake Passage on circulation in the South Atlantic*, scroll to *Variations in pathways and intensities of deep and bottom water*

<https://www.awi.de/forschung/geowissenschaften/geophysik/expeditionen.html>