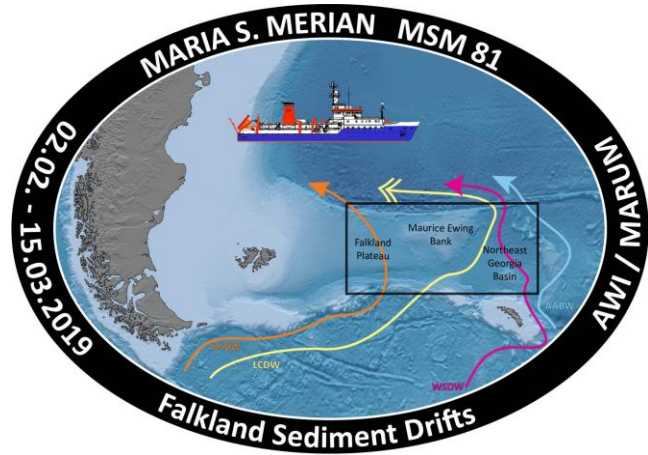
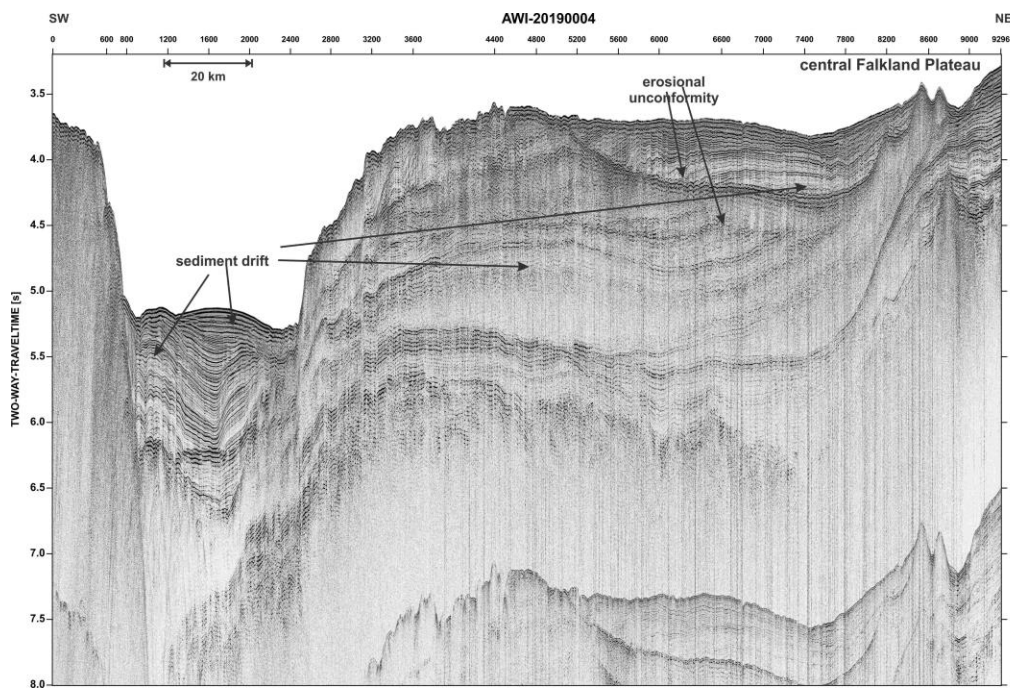


**Expedition MSM 81
Valparaiso - Montevideo**

**Weekly report No 3
18 February – 24 February 2019**



11 Days ago we have started to collect seismic data on the Falkland Plateau immediately west of the Maurice Ewing Bank. Rhythmic pulses image the subsurface, especially sedimentary sequences. These pulses are generated by our seismic sources, which we tow behind the vessel.



These pulses travel through the subsurface and are reflected at sequences boundaries. The pulses are then recorded by our streamer, a 3000 m long cable also towed behind the vessel. Plotted next to each other the reflected pulses

form a seismic profile and show an image of the subsurface. The figure shows a seismic profile, which has been collected from the south onto the central Falkland Plateau. One can clearly see the channel south of the southern flank of the plateau, where the Circumpolar Deepwater forms the sedimentary structures. The plateau itself also shows such sediment drifts. The activity of the water masses can also be seen in erosional unconformities, where deposited sediment is picked up and transported away by the water masses.

This way we collect profile after profile to retrieve a clear idea on the structure of the Falkland Plateau. During a change between profiles Thursday night we came across a table iceberg. This



is a reminder that we work in the putflow area of Antarctica.

(Foto: T. Eggers)

We now have made it halfway through the cruise. Friday was halftime! We thus celebrated this yesterday, crew and science party together. The weather decided to be friendly, next to no

wind, quiet sea. But this will change quickly. Tomorrow, we will be visited by a fat low!

All participants are cheerful and send home greetings.

Southwestern Atlantic, February 24th 2019, 50° 46.785' S / 47° 5.907' 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>