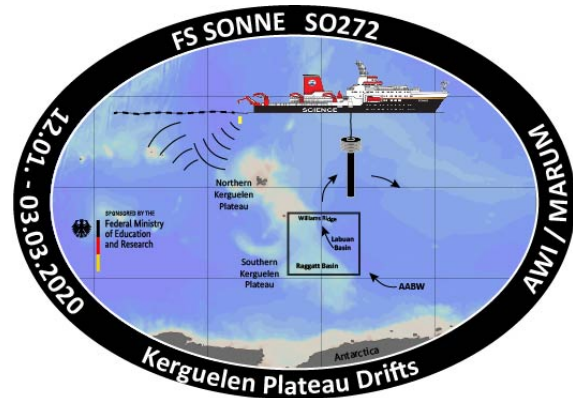


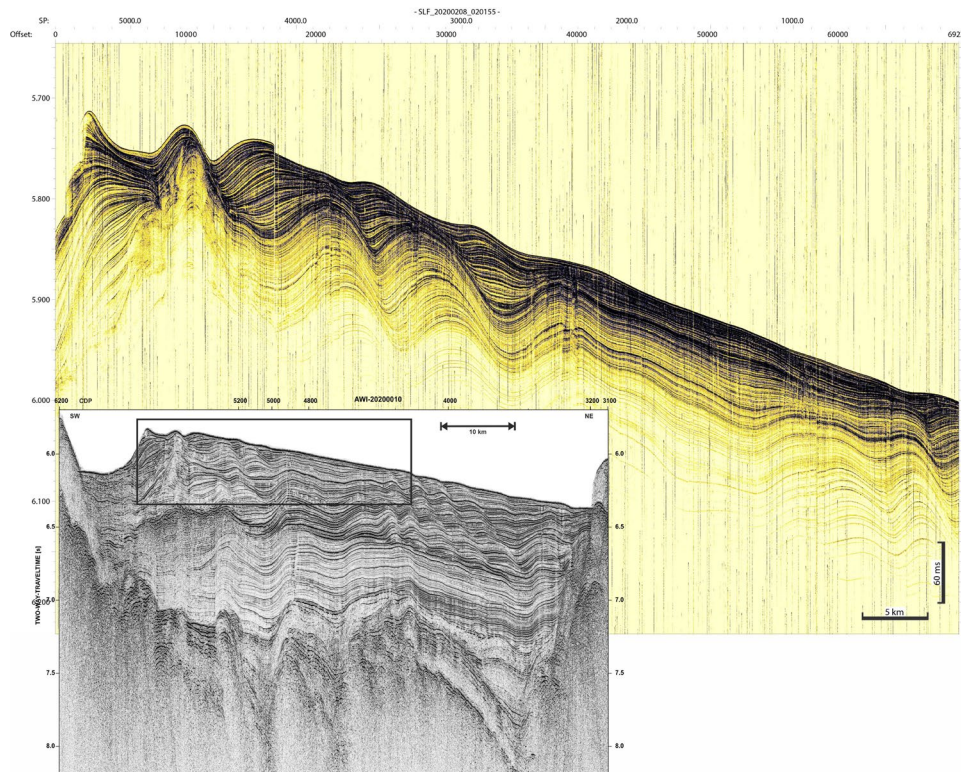
Expedition So 272 Post Louis – Cape Town

Weekly report No 5 10. February – 16. February 2020



The fifth week of our expedition has begun. Although still three weeks remain until we go into harbour in Cape Town we feel that the cruise will come to an end soon. We only have about one week left to collect more data. And we still have plenty of ideas for additional surveying, which would fill two or even three weeks. Time is short, and we have to focus. So we decide to collect seismic profiles on the central Kerguelen Plateau, and in-between screen the seismic data to identify possible drill locations for a scientific drill proposal.

In parallel to our seismic profiling we also gather data about the uppermost ~200 m of the

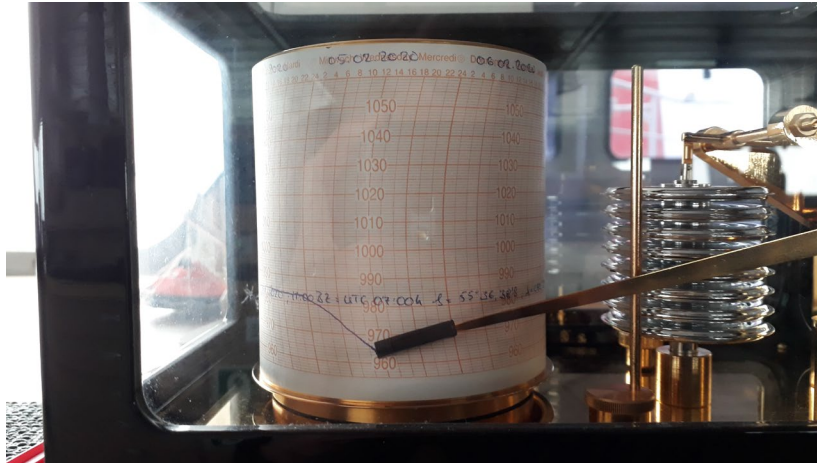


sedimentary column using the Parasound™ system. This is an ideal supplement to the seismic data (small figure), since the seismic data are less high-resolution than the Parasound™ data (larger figure) even though they image larger depth intervals of the subsurface. The combination of seismic reflection data with

Parasound™ data allows conclusions regarding very young sedimentation processes in relation to older tectonic processes. Furthermore, we use the Parasound™ data to pick location for

geological sampling. For that, we need to find undisturbed, well layered sedimentary sequences. The geological sampling shall commence at the of the week when we have gathered a good overview of the sedimentary sequences.

So far, we have been quite lucky with respect to weather (knock on wood!). While the pressure



has been very low (see the barograph on the bridge, 968 mbar), we did not encounter very nasty winds (max 9 bft on average) or extremely high waves (max 5 m on average). Our Australian colleagues, who operate on the RV Investigator in the William's Ridge area and collect seismic and bathymetric data as well as dredge samples, unfortunately

were not that lucky. When we sailed south they stayed in the northern Labuan Basin and have been hit by much worse weather. But then we have a meteorologist (German Weather Service) on board, and he obviously acts as a mascot against bad weather.

We send home cheerful greetings.

Southern Indian Ocean, February 16 2020, 56° 12.32' S / 81° 10.09' E

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<https://www.awi.de/en/science/geosciences/geophysics/research-focus/gateways-of-the-southern-ocean.html> under *Southern Indian Ocean circulation is archived in Kerguelen Plateau structures*

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