

Scientific Cruise SO315 with RV SONNE

CARNIVAL

08.10.2025 (Antofagasta/Chile) –

17.11.2025 (Balboa/Panama)



2. Weekly Report (13.10.–19.10.2025)

On 13 October, the SONNE reached its second working area north of the Mejillones Peninsula (Chile), one of the strongest coastal upwelling areas in northern Chile. Here, interrupted by a stop to refuel the ship in the port of Mejillones on 14 October, sediment cores (multicores and gravity cores) were obtained with great success at a total of eight stations along depth transects between 80 and 2,500 meters water depth. The highlight was the recovery of an approximately 18-meter-long gravity core with laminated sediments from Mejillones Bay. Accompanying this, extensive sampling of the water column was carried out at one coastal and one offshore station using the CTD probe, water crown sampler, marine snow catcher, in-situ pumps and multi-net. On the morning of 18 October, the scientific programme in the second working area was completed. After transiting to the third work area west of the Peru-Chile Trench, an Argo float was deployed. Then the hydroacoustic survey was resumed and the first station work was carried out on 19 October.

A prerequisite for successful sediment core sampling is the hydroacoustic exploration of the seafloor. The location of the working areas on a tectonically active continental margin with numerous undersea canyons and sediment slides makes finding suitable stations for SO315 a particular challenge. Only with the aid of sediment and multibeam echo sounders can the bathymetry and structure of the seafloor be reconstructed and autochthonous sediment sequences identified. Without the tireless work of the SO315 hydroacoustics team, usually carried out at night, the success of the expedition to date would not have been possible.

Everyone on board is well and the cooperation between the scientific team and the ship's crew is excellent. With calm seas, everyone is looking forward to the next station work.

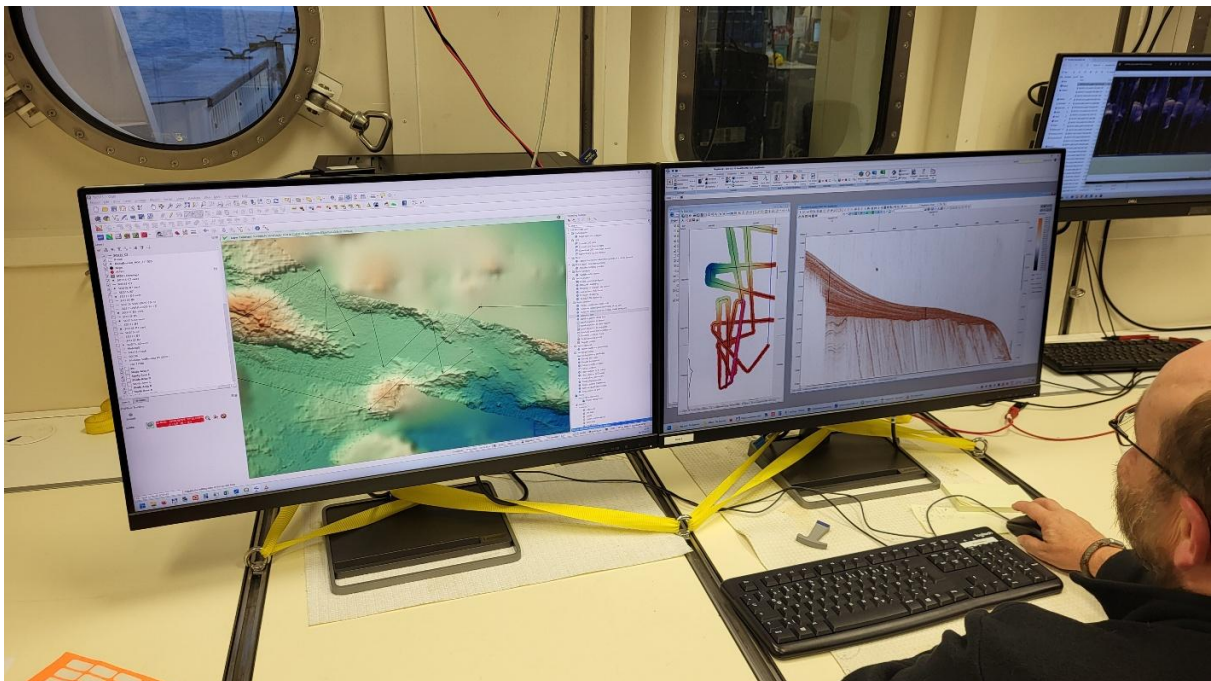
Best regards from the South Pacific,

Patrick Grunert (Chief Scientist)

Frank Lamy, Andrea Jaeschke (Co-Chief Scientists)



The SONNE on Oct. 16 in front of the coast of northern Chile (picture: V. Diekamp).



Hydroacoustic surveys are a key element to the success of SO315 (picture: P. Grunert)