Forschungsfahrt des FS SONNE **SO 314:**

T-SECTOR Southeast Pacific Rise

13.08.2025 (Papeete/Tahiti) –
05.10.2025 (Antofagasta/Chile)

Scientific Cruise SO 314, 7. Weekly Report: 22.09.-28.09.2025

Following the OFOS survey two dredges were deployed along the central ridge of the SEPR and four dredges on bathymetric highs west of the SEPR between the afternoon of the 21st and the afternoon of the 22nd in order to collect samples of rocks of bathymetric highs that were not only controlled by seafloor spreading at the ridge but by different magmatic processes.
Thereafter another bathymetric survey was run until the evening of the 23rd to complete the high-resolution bathymetric map of the SEPR study area. At the same time the Magnetometer was towed one more time to measure the changes in the inclination of the magnetic field recorded in the basaltic crust and thus enabling a more precise dating of these rocks.
To finalize the station work 6 further gravity cores were taken on the eastern flank of the SEPR to fill gaps in the continuous coverage of sediment cores reaching the basaltic basement and containing basaltic glasses of the past 900,000 years between the evening of the 23rd and midday of the 24th.
After the end of the station work the SONNE directly started to make her way to Antofagasta. Along the track small deviations from a direct course were included to enable a high quality bathymetric mapping of submarine volcanoes (seamounts) that had not been investigated in detail so far. In addition, three further ARGO floats were deployed at previously defined locations.

Greetings from Martin Frank (Chief Scientist SO 314), Heidrun Kopp (Co-Chief Scientist SO 314) and the entire team and crew of SO 314