

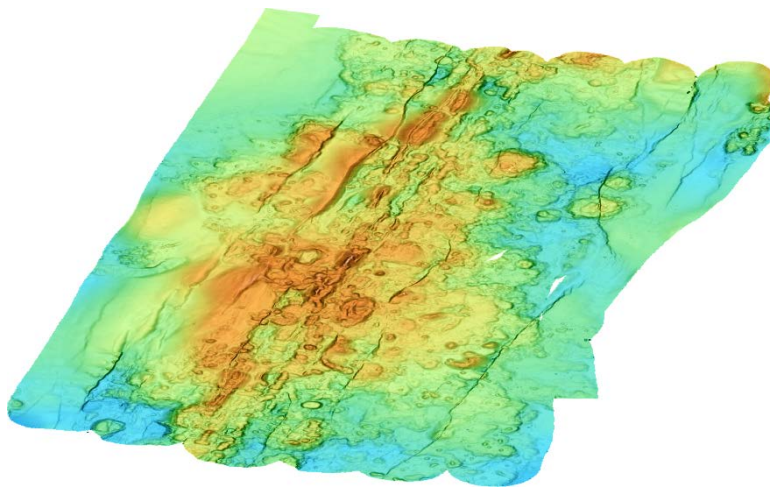
MSM75

Weekly Report No. 1

29.06.2018 – 01.07.2018

Following the completion of all necessary works in the port of Reykjavik, the „Maria S. Merian“ left port on the afternoon of 29th June and began the 9 hour transit to the first of our 4 working areas on the Reykjanes Ridge. On board is a group of geologists and biologists working on two complementary projects: The geologists are investigating the volcanic and hydrothermal processes occurring on the ridge, aiming to discover how these change with distance away from Iceland and what this tells us about the energy and material budgets of the spreading axis and how the Earth’s plates are cooled. The biologists want to investigate the influence of hydrothermal vents on benthic ecosystems. Our first working area is around the only known hydrothermal field on the Reykjanes Ridge, called Steinaholl

The weather for the transit was perfect, allowing labs to be set up and making the station planning relatively easy. The initial work consisted of using the ship to produce a bathymetric map of the seafloor in the working area – with water depths of only around 200m, this map is incredibly detailed, with a “pixel size” of only 5m. Using this map we are able to pick out features to investigate with the two deep-submergence vehicles we have on board – GEOMAR’s autonomous underwater vehicle “ABYSS” and remotely-operated vehicle “PHOCA”.



Our first map of the Reykjanes Ridge showing old seafloor smoothed when the glaciers were here 10.000 years ago and the new, rough, volcanic ridge in the centre.

At the time of writing both vehicles have just returned successfully from their first deployments, bringing spectacular information and samples from the seafloor. The relatively small scientific crew on board will be working hard in the coming days to interpret them!

All on board are well and thoroughly enjoying the fascinating scientific investigation at sea. The support of Captain and Crew is, as usual, exceptional.

In the name of the scientific team,

1 July 2018

Colin Devey