

POS502 Science Report - week ending 17/07/2016

Isobel Yeo



View from the RV Poseidon leaving Reykjavik (Isobel Yeo)



Snaefellsjokull glacier seen from RV Poseidon on transit (Nico Augustin)

Most of the science party moved onboard the RV Poseidon on the 13.07.2016 with a few members joining on the 14th. The majority of time on both days was spent installing the ROV PHOCA control container and the ROV winch onto the back deck and mobilising the vehicle. A harbour test of the ROV was carried out successfully on the afternoon of the 14th.

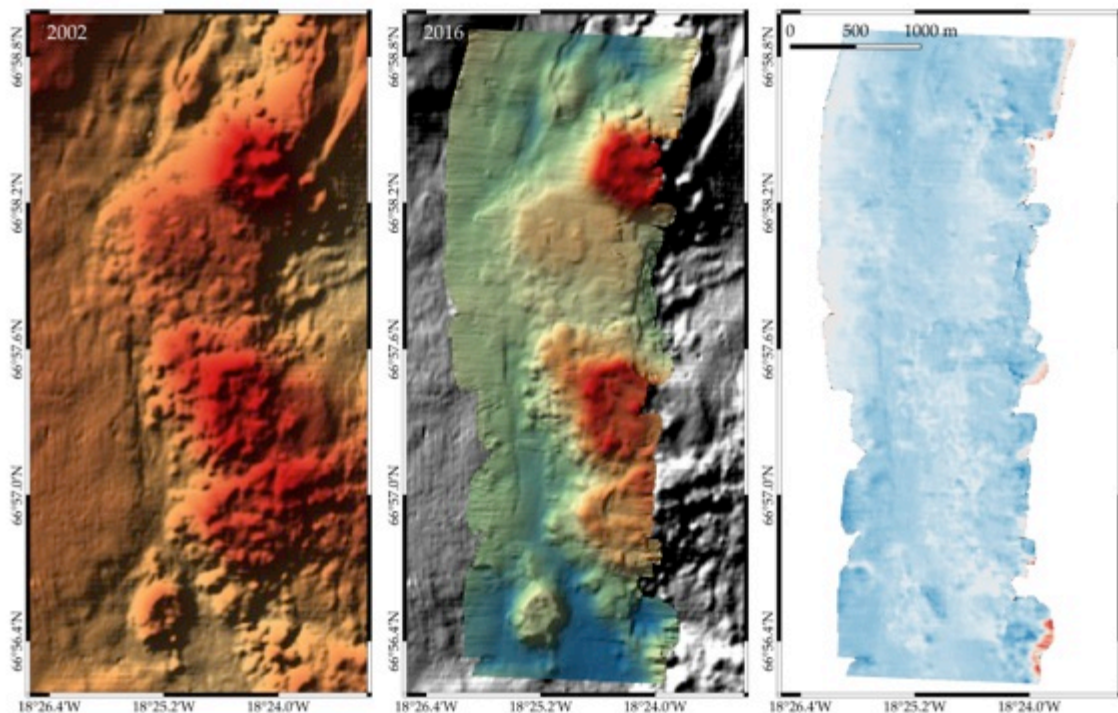
At 09:00 on the 15th we set sail for our first ship multibeam survey station over an area where fresh basaltic lavas have been recently dredged and which has been surveyed periodically by Icelandic expeditions to identify short timescale volcanic activity. The transit was around 320 nm and took 41 hours. We collected multibeam data successfully 9.5km² of seafloor in water depths of 100-

300 m. No differences were found between this survey and the survey conducted in 2002, indicating no major volcanic activity in this area in the last 14 years. The multibeam survey was completed at 05:00 on the 17.07.2016.

After completing the survey we began the transit to the main working area on the Northern Kolbeinsey Ridge (NKR) at 71°N. The transit is 250 nm and we estimate arriving at 05:00 on the 18.07.2016. The first operation on arrival will be a short ship multibeam survey to check the positioning of our bathymetric dataset collected in 2012, followed by two volcanic wax corer deployments and the first ROV PHOCA deployment. These first stations will be conducted on lava flows in one of two parallel axial valleys on the southern end of the NKR identified from AUV Abyss sidescan sonar imagery acquired in 2012. The Deep Survey Cam (GEOMAR) system will be mounted on the ROV and 3D photogrammetric models of the seafloor lava flows will be produced using the data.

All on board are well and looking forward to the science activities in the coming days.

Greetings on behalf of us all,
Isobel Yeo



The POS502_MB01 survey area over Southern Stóragrunn in 2002 (LH panel) and 2016 (central panel) and the difference between the two (RH panel). Colour scales in all three panels are different, with warm colours representing shallow depths in the first two and pale blue and white representing differences of $< \pm 10$ m between the two grids in the RH panel.