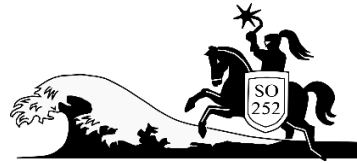


SO252: Ritter Island

4. Weekly Report



This is the fourth weekly report of cruise SO252 "Ritter Island". After having deployed the P-Cable system on Sunday evening we continued shooting until Saturday 26 of November without major interruptions. The only problems that we faced was an airgun supply line that came off four times during the nights from Wednesday to Thursday and Thursday to Friday. The gun had to be repaired, but the system was up again within a short time. On Friday morning at 08:00 a fishing net got stuck to the P-Cable system but it came off by itself. To check that there was no damage we conducted a drone flight and could find no problems although the seven port side streamers did not transmit data during the time when the fishing net was entangled.

On Saturday morning we started to retrieve the P-Cable system at 09:20. After the system was back on deck by 10:30, we steamed to the first ocean bottom seismometer site and began with the recovery of the OBS. During the afternoon the wind picked up to Bft 8 with 2 m waves. Except for OBS2 all OBS surfaced until 18:00 and we conducted heat flow measurements during the night along a transect that runs between Sakar and New Britain islands and up the flank of Ritter Island.

Unfortunately, we were not able to penetrate the seafloor at any of the ten attempted sites indicating a very hard seabed and explaining why gravity coring the week before was not successful either.

On Sunday at 08:00 we began to locate the OBS by ranging it from four different directions around the deployment point. It was possible to determine its location to within +/- 50 m. At 11:00 we deployed HyBis and ran a search pattern around the determined location. We found the OBS which had its swim line wrapped around the anchor and recovered it using the grab. The operation was finished by 14:00. During the afternoon we collected multi-beam data as close as possible around Ritter Island. Afterwards we conducted two drone flights that were finished by 17:00 and provided a complete video coverage of the western flank of Ritter Island. In the evening we redeployed the P-Cable system and started collecting 3D seismic data by 20:00. The plan is now to continue shooting for six days by which time we should have covered the entire Ritter Island deposit until the bar between Sakar and Umboi islands and can then focus on sea floor imagery and grab sampling.

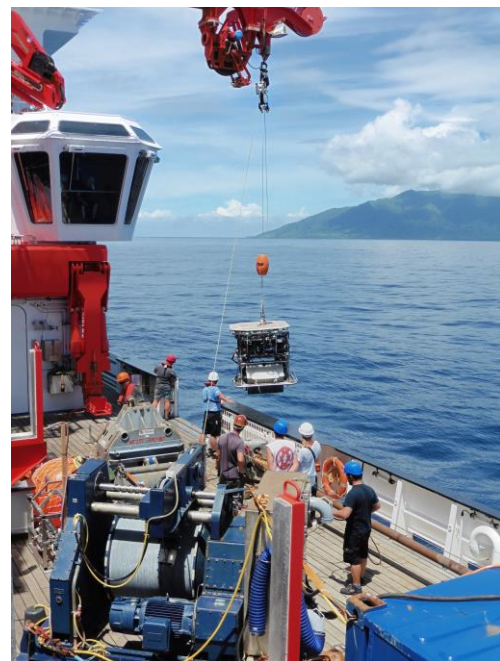


Figure 1: HyBis deployment off Sakar Island to recover the OBS that was entangled in its swim line. Photograph: Oliver Meyer.

On behalf of the cruise participants,
Christian Berndt (Chief scientist)