In the early afternoon of the 14th of October we completed our 2D seismic surveys that were designed to collect data over four proposed drill sites for the IODP proposal “Volcanism and tectonics in an island-arc rift environment (VolTecArc): Christiana-Santorini-Kolumbo marine volcanic field, Greece”. The data are of excellent quality and represent a clear improvement to the previously available data in the region. We then deployed six ocean bottom seismometers on the flanks of Kolumbo volcano.

We will use the ocean bottom seismometer data after the cruise to determine seismic velocities of the sub-seafloor. At 7 p.m. we began acquiring additional 2D seismic profiles within Santorini Caldera that we completed on the morning of the 15th.

We then began preparing the streamers for the P-Cable system. The P-Cable system enables 3D seismic imaging by towing short streamers in parallel behind the vessel (Figure 1). The streamers are attached to a cross cable which itself is held in place between two trawl doors. The data collection is carried out by surveying along pre-defined waypoints that, in our case, cover a 12.5 by 3 km area. We began deploying the P-Cable system around noon. The deployment took four hours in total and we began acquiring data for the planned 3D seismic dataset at 4 p.m. Thanks to ideal weather and sea state, we have been able to acquire data uninterrupted since the deployment. Our preliminary observations of the data onboard give us confidence that we will be gain new insight into the geological history of Kolumbo Volcano.

Figure 1: The P-Cable system in operation (Photo: Thies Bartels).

On the 17th of October, our Greek colleague Paraskevi Nomikou disembarked onto a shuttle boat to be transported to Santorini to give the Greek President Prokopis Pavlopoulos an introduction to the island’s geology. Exhausted, but with a broad smile upon her face, our colleague Paraskevi returned to Poseidon at 5 p.m. She took this opportunity to take photos of Poseidon from the water (Figure 2).
The atmosphere on board remains very good and we are looking forward to continuing with our scientific programme in the coming week.

On behalf of the science team,
Jens Karstens