

RV SONNE cruise SO299/2

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**Reconstructing volcanic eruptions and tsunamis of
Krakatau volcano (Indonesia)**

15 August – 2 September 2023
Singapore – Port Louis (Mauritius)

Port Louis, Mauritius



Weekly Report No. 3 (28/08 – 03/09)

We spent the third week of trip SO299/2 on the transit to Mauritius in fairly stormy, but mostly sunny conditions. On Monday, Tuesday and Wednesday an Argo Float was deployed. These floats drift with ocean currents, moving up and down between the surface and a certain water depth to measure oceanographic parameters. The data is sent via satellite to the Argo Global Data Acquisition Centers, where it is made available in near real-time.

The bio-optical measurements and the recording of underway data as part of the Underway Research Data project of the German Alliance for Marine Research (DAM) continued until late Wednesday evening, shortly before entering the exclusive economic zone of Mauritius. The bio-optical measurements of the surface water and the water color along the transect provided high-resolution datasets of important oceanographic parameters, such as salinity, water turbidity, and color, as well as phytoplankton biomass. They showed comparatively constant conditions along the transect, as is typical for the nutrient-poor, open areas of the ocean. Due to the high frequency of the data acquisition, the physiological effect of the light adaptation of the phytoplankton could also be observed using the fluorescence data collected.

We entered Port Louis on Saturday morning and disembarked on Sunday. We return with exciting new data and insights into the events of Krakatau in 1883 and Anak Krakatau in 2018. On behalf of all the scientists involved, I would like to sincerely thank Captain Oliver Meyer and the entire crew of the SONNE for their tireless and active support, without which this trip would not have been so successful.

Greetings from aboard RV SONNE on behalf of all participants.

Morelia Urlaub, GEOMAR Helmholtz Centre for Ocean Research Kiel
Chief Scientist



Deployment of an Argo Float during transit in the Indian Ocean.