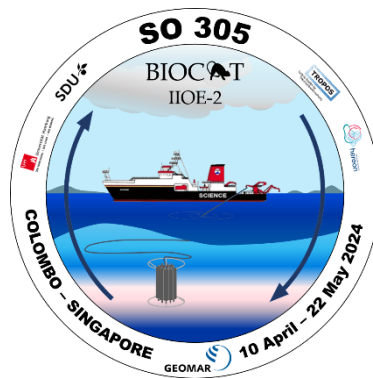


R/V SONNE, 12 May 2024

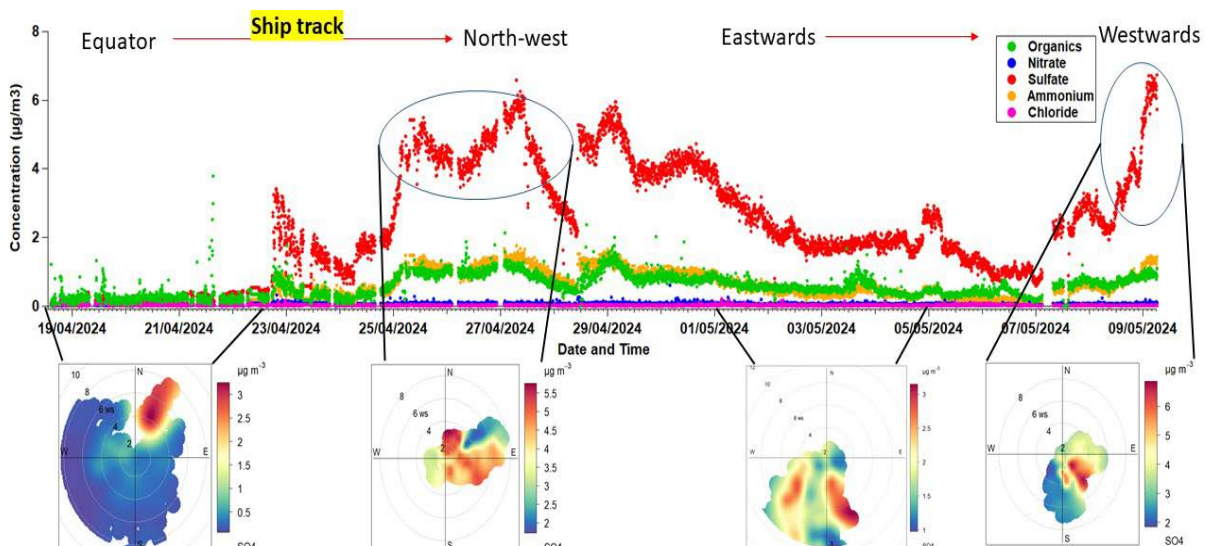


5th Weekly Report (6 - 12 May 2024), R/V SONNE cruise SO305 BIOCAT-IIOE2, Colombo (Sri Lanka) - Singapore

This week we sampled six stations (#32 to #37) from 85°45'E to 89°36'E along 15°N. Additionally, we sampled one station (#38) at 16°N 89°36'E. Stations #32 and #37 were 24h stations. At station #33 (on 7 May) we picked up the drifting sediment traps that we had deployed at station #30 on 4 May.

Due to a medical emergency the cruise was terminated prematurely at 10:00 am on 11 May after the station work at station #38 had been completed. All underway measurements in the atmosphere and in the water were stopped on 11 May at 14:00h with entry into the EEZ of India. We are currently on the direct route to Singapore in order to provide the best possible care for the patient. We are expected to arrive in Singapore on the morning of 16 May.

In addition to the extensive sampling of the water column, aerosols and trace gases in the atmosphere will also be measured during the journey by colleagues from TROPOS Leibniz Institute for Tropospheric Research (Leipzig). An example can be seen in the figure below.



The figure shows the mass concentrations of chemical composition over the ship track with windrose pollutant plots, which gives insights into the airmass transport. The sulphate concentration over the period increases as the cruise approaches towards the northwest or a coastal area close to the lands. The increased pollutant concentrations mostly refer to transported airmass either from the lands or

the sea spray, depending on the wind direction and speed. Dimethyl sulphate (DMS) and sea spray are the main sources of sulphate over the ocean surface.

Heenan W. Bangs

and the Scientific Party of SO305
heading towards Singapore