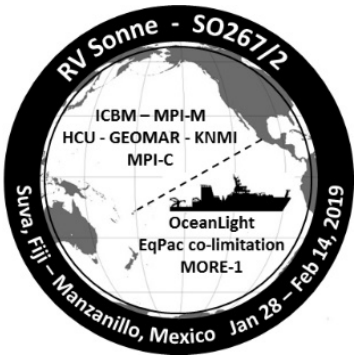
R/V Sonne SO267/2:

OceanLight / More-1 / EqPac co-limit

Suva – Manzanillo

Weekly Report 1: 28.01 – 03.02.2019



R/V SONNE left the port of Suva in Fiji on Monday 28 January 2019 setting course for Manzanillo in Mexico. On this cruise, 16 scientists from the institutes ICBM, GEOMAR and MPI with affiliate institutes HCU, FU Berlin and KNMI will conduct underway and in-situ measurements. Scientific aims of the Pacific Ocean cruise SO267/2 are a combination of three different projects.

Figure 1. R/V SONNE leaving Fiji Islands (Photo: Steffen Dörner).

The OceanLight project aims to collect above- and underwater optical measurements, as there is little to no hyperspectral as well as bio-optical data available in open-access for the Pacific Ocean. Findings from this campaign are therefore expected to contribute towards validation of satellite remote sensing end-products and expanding the optical knowledge base of these waters. Furthermore, the project will assess the Underway-System (FerryBox) of R/V SONNE. Within the MORE-1 project atmospheric properties of aerosol, clouds and trace-gases will be collected and serve as calibration for satellite remote sensing retrievals and evaluation of global modelling. Further investigations include the preparation of bathymetric data for international databases. The EqPac co-limit project integrates experimental, proteomics and fluorescence approaches to investigate the nutrient co-limitation of phytoplankton productivity in surface waters of the Equatorial Pacific.

Before measurements could be conducted a distance of 1500 nm was sailed across the Pacific islands EEZs. During this cruise the first priority was to set up all scientific equipment and labs of the different groups. In respect to the diversity of participating working groups the time of the cruise was also used to familiarize with the different fields of work by undertaking a “scientific tour” through the labs.

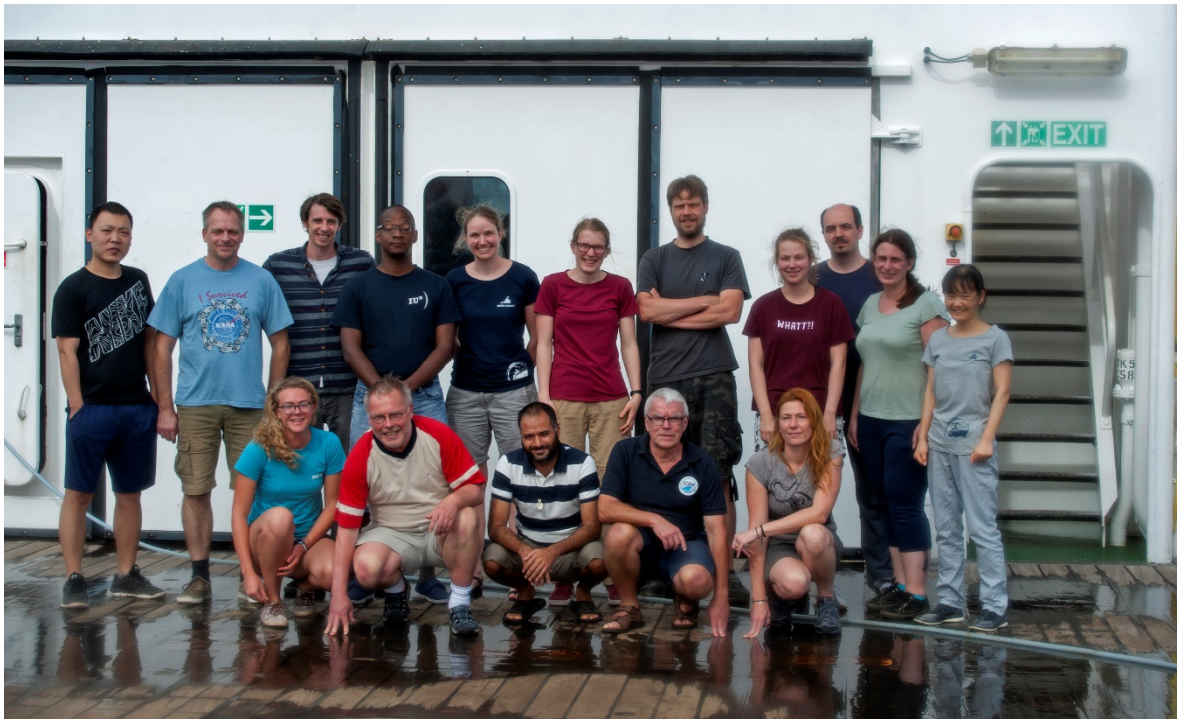


Figure 2. Scientific team of cruise SO267/2 (Photo: Thorsten Bierstedt).

R/V SONNE reached the open-waters or EEZ borders of the Pacific islands on Saturday 02 February, shortly before midnight. We successfully deployed a Towfish to sample the surface waters along the cruise track to Manzanillo. Continuous inherent and apparent optical properties as well as meteorological observations commenced early Sunday 03 February morning. The first underwater light field station was done at 10:20 a.m. (BT). Detailed information on the scientific work of the different working groups will be included in the next report.

All people are feeling good, the weather is quite good, and looking forward to the upcoming working days.

On behalf of the scientific party of SO

267/2 Daniela Voss