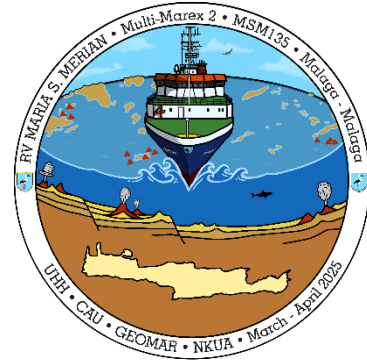


## 1. Weekly Report MSM135

3.-9. March 2025

The technical preparation for Expedition MSM135 aboard the research vessel Maria S. Merian began in the port of Malaga on the morning of March 3rd with the unloading of scientific equipment from containers and the truck's loading area, with the crew's usual competent assistance. Winches were placed on deck, and the hangar filled with numerous pallets, where the equipment was mostly secured in aluminum boxes.



The main group arrived on board the following day, allowing for the installation of various instruments on deck and in the laboratories to be completed to the extent that the ship was declared "ready to sail" in the evening. Later, the group of scientists from Hamburg, Kiel, and Athens gathered in Malaga's old town to get to know each other and bid farewell to the mainland.

On March 5th, the call was given: "Cast off!"—and the five-day transit to the working area in the southern Aegean began. The eastward course led against wind and waves, allowing all participants to gradually adapt to the sea conditions. These days were used to finalize technical preparations and exchange information on the scientific objectives of the expedition.



*Foto: Stromboli im Abendlicht an Steuerbord.*

Densely populated coastal regions are particularly vulnerable to extreme Earth system events such as storms, tsunamis, or volcanic eruptions. The overarching goal of this research cruise is to acoustically map sediment archives of the volcanic centers in the Aegean and the continental slopes of Crete to identify indications of extreme geological events such as tsunami-triggering landslides, volcanic eruptions, and tectonic activity. To achieve this, marine geophysical surveys (including multichannel seismics, sediment echography, and

multibeam mapping) and sediment sampling, particularly of volcanic deposits, are planned. This information forms an essential basis for the 3rd research mission of DAM (German Alliance for Marine Research), which analyzes "Marine Extreme Events and Natural Hazards." Through the DAM collaborative project MULTI-MAREX, a real-world laboratory is being established to study geological extreme events and related hazards, aiming to develop the necessary knowledge for managing these risks at different scales and providing measures for early warning systems. As part of the MULTI-MAREX project, three research cruises in the Aegean are planned to collect geophysical and geological data, enabling the refinement of submarine geohazard scenarios for the central Aegean. Our expedition aims to assess the hazard potential of underwater volcanoes in the Aegean and landslides on the continental slopes of Crete.

On the evening of March 8th, our transit took us past Stromboli. This towering volcanic cone north of Sicily provided an impressive demonstration of the immense forces that shape volcanoes. The route continued through the Strait of Messina, and by the end of the week, the Peloponnese came into view.

All participants are doing well and send their greetings home.

Christian Hübscher  
Chief Scientist MSM135