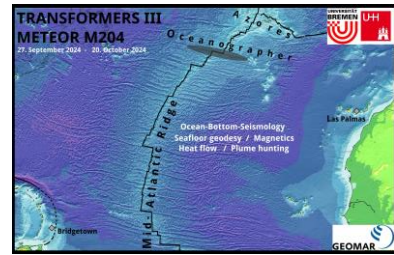


METEOR M204

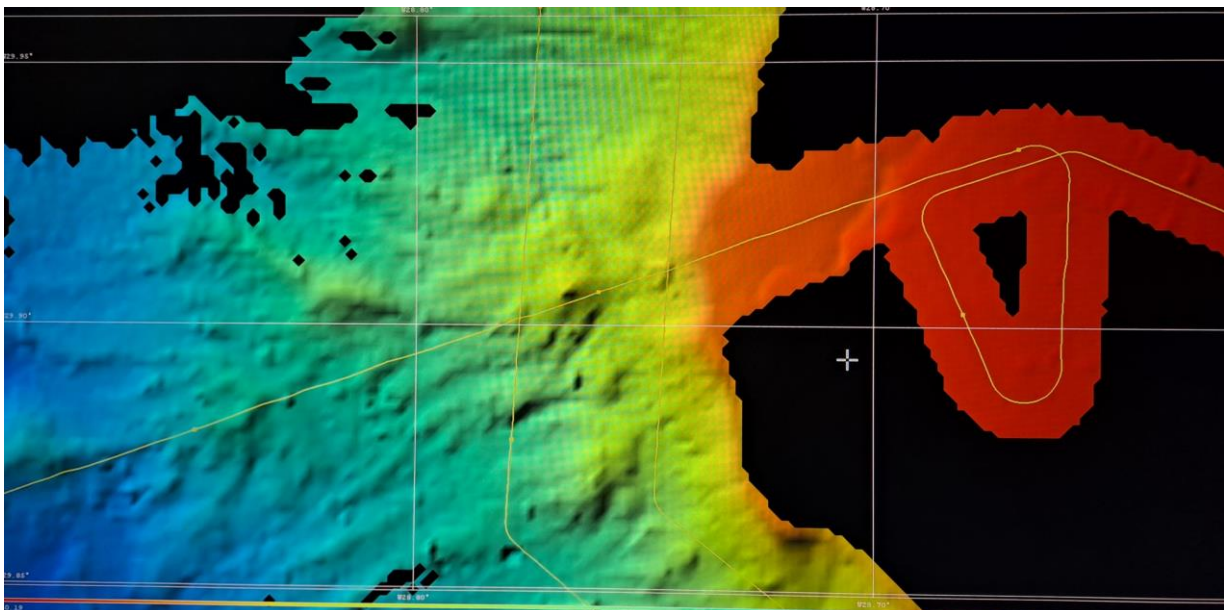
Bridgetown – Las Palmas

27. September bis 20. Oktober 2024



4. Weekly Report (14.10.- 20.10.2024)

The fourth and last week of the Expedition aboard METEOR was dominated by the five-day-long transit from the working area at the Oceanographer transform fault to Las Palmas. However, as the predicted weather conditions forced us to leave the area about 2 days too early, we dedicated some time to re-map the Great Meteor Tablemount near 29°57'N/28°35'W. The mound is a tall guyot (flat-topped seamount), rising from over 4500 m to just a few hundred metres. Such a feature cannot be mapped entirely in such a short time. The shallow top at just 330 to 285m water depth covers about 1500 km² and would require several days of surveying. Therefore, our activity was a reconnaissance survey. We decided to chart the guyot along three roughly 150 km long profiles. In addition, we circled the mount to map its terraces, which formed during the subsidence and erosion of the former volcanic peaks. Erosion is also responsible for many landslides on the upper slope accompanying the erosion of the seamount.



Screenshot made while mapping the edifice of the Great Meteor Seamount. The „circle“ in the ship's track was due to map a small bathymetric high of 30 m shown in nautical maps; though, it didn't exist.

The Great Meteor Seamount was first detected in 1938 by the German METEOR-I, and the tall guyot was named after the vessel. Our mapping campaign was conducted with the METEOR-III, which will be replaced in 2026 by its new successor METEOR-IV. The bathymetric survey was conducted from the 14th to the 16th of October 2024; thereafter, METEOR headed eastward toward Las Palmas. We reached the territorial waters of Spain on the night of the 17th/18th of October, and all scientific operations were concluded. On 19.10.2024, we sailed at 7 a.m. in the dawn past the island of La Palma. After the hazy sky cleared in the afternoon, we could see Tenerife faintly in the clouds.



Last sunset before disembarkation in Las Palmas to the north of Tenerife.

On Sunday at 8:25 a.m., METEOR met Gran Canary and the pilot to the east of the port of Las Palmas. At 9:15 a.m. the vessel was safely at the pier, and the survey was concluded.

All scientific participants are grateful to Captain Detlef Korte and his crew, and we acknowledge the excellent support and great working climate on the ship.

Best regards from Las Palma, Gran Canary, Spain,

Ingo Grevemeyer

GEOMAR Helmholtz Zentrum für Ozeanforschung Kiel