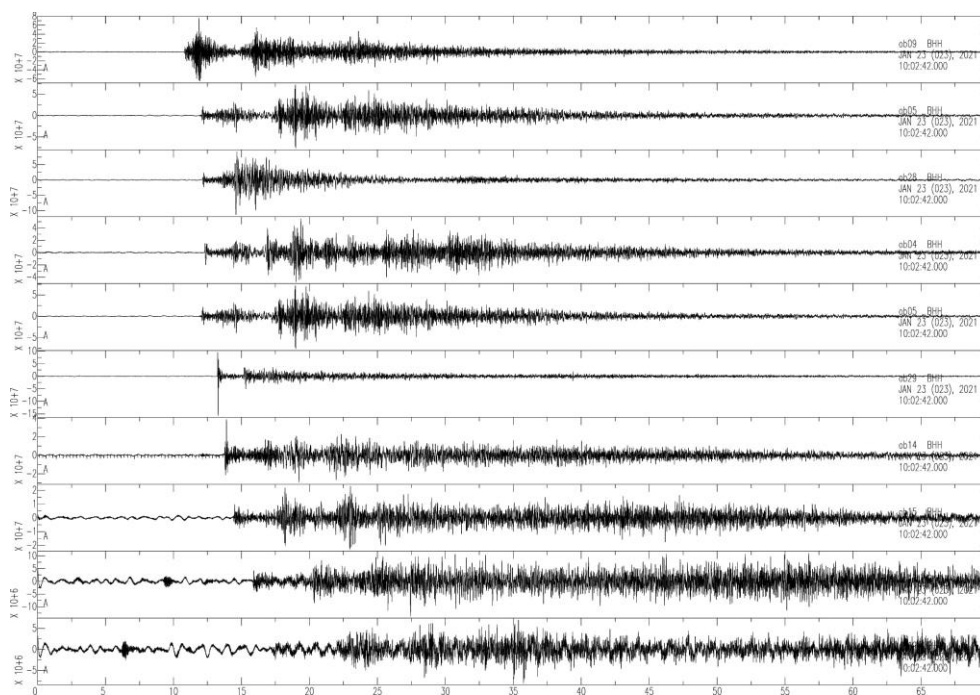


4. Weekly Report of Expedition No. M170 of R/V METEOR

Emden, Germany (11.01.2021) – Emden, Germany (14.02.2021)

At the end of the third week of the TRANSFORMERS expedition, a tragic death of a crew member called for an unexpected early end of scientific operation. Therefore, at the beginning of the fourth week of the cruise, we only recovered those five ocean-bottom-hydrophones (OBH) which would otherwise automatically release during the survey, namely on 4th of February 2021. On Monday 1st of February 2021, we recovered these stations between 10 a.m. and 7 p.m. UTC, facing rather rough sea conditions and strong wind. Thereafter, R/V METEOR left the survey area, heading back to Emden. Unfortunately, we left behind 18 ocean-bottom-seismometers (OBS) still sitting on the seabed. We have to recover those OBS in the near future, but no later than summer of 2022. Further, we had to abandon a number of planned dredges aiming to reveal the complex geological structure and nature of oceanic transform faults and fracture zones.

During the transit back to Emden, we collected underway data by swath mapping the seafloor in international waters. On Friday 5th of February 2021 at 10:30 local time, R/V METEOR reached the territorial waters of Spain and all scientific operations were concluded. In addition, we began analysing the recordings of the OBH and identified at least 150 local earthquakes, of which 72 could be localized. Additional events will be revealed when the entire dataset of both OBH and OBS can be jointly analysed.



Local earthquake recorded at the ocean-bottom-hydrophones

At the end of the fourth week, R/V METEOR is currently sailing to the west of Brest, France, reaching soon the English Channel. In the morning of Wednesday 10th of February 2021, we will meet the pilot station at the mouth of the river Ems, reaching the port of Emden at noon.

In the name of all cruise participants, best regards from 48°20'N / 5°55'W,

Ingo Grevemeyer

GEOMAR Helmholtz Centre for Ocean Research Kiel