

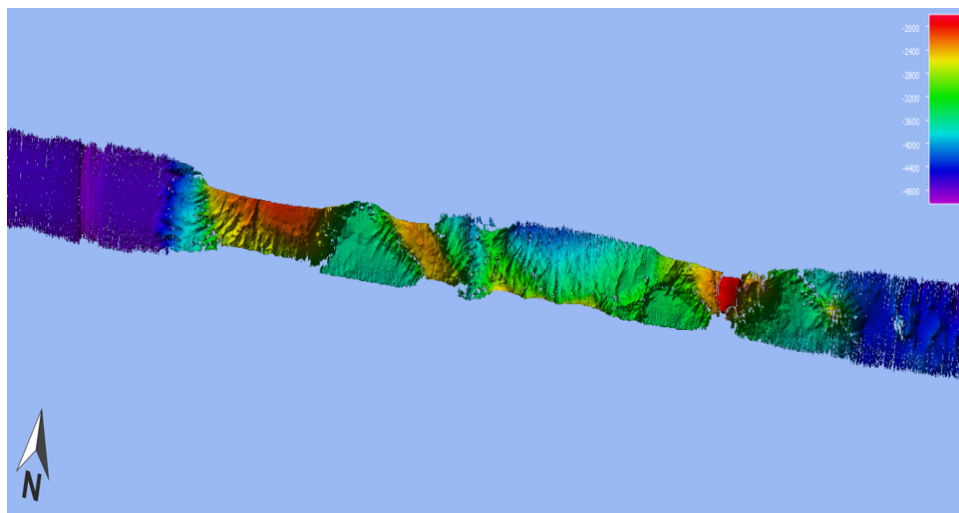
R/V MARIA S. MERIAN
MSM101, 12.06. - 20.07.2021, Emden - Emden
2nd Weekly Report, 14.06. - 20.06.2021

NOVA SCOTIA MARGIN **(NOVAMAR)**



This morning, June 20th, we reached the continental margin off Newfoundland after nine days of transit within the planned time window. Except for a low pressure system the transit went smooth without major obstructions from weather and swell. The change from the warm water masses of the Gulf Stream to the colder outflow from the Labrador Sea was clearly noticeable in the early morning by a temperature drop of more than 10° Celsius in the surface water and in the air. Due to the change in the near-surface water masses, profiling of the altered sound wave velocities through the water column became necessary. The continuously performed hydroacoustic measurements with ADCP, multibeam and sediment echosounder had to be calibrated against the changed water properties, such as temperature and salinity.

To control the continuous recording of the hydroacoustic data, a 24-hours watch service has already been established in the hydroacoustic laboratory and the junior scientists here on board have been instructed in the application and interpretation of the hydroacoustic data.



*Fig. 1 (F. Groß):
Excerpt of the
continuous mapping
of the seafloor. The
colors indicate parts
of submarine ridges
and sea mounts
(yellow-red) or
trenches and
depressions (blue-
violet).*

In addition to the ongoing work, our students were able to participate in digital courses during the current summer semester at Kiel University and, in some cases, even could successfully complete midterm exams digitally thanks to the very stable internet connection. Preparations for geological sampling with the multicorer and the gravity corer were started during the past week and the laboratories were equipped accordingly. In scientific meetings, accompanied by literature studies, the entire work program of the NOVAMAR expedition was discussed. Here, the daily work steps ahead for the recovery of postglacial and Holocene sediment cores and the preceding profile surveys with the multibeam and sediment echosounder on the shelf and upper continental slope for the search of suitable geological sampling stations were discussed in detail.

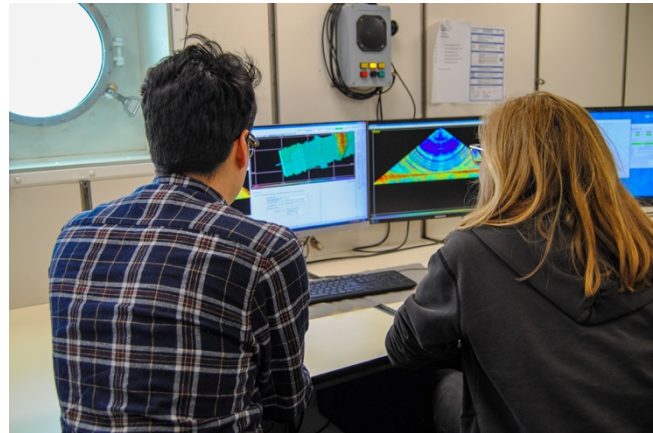


Fig. 2 (J. Wolf): Preparation of the geological sampling in the hangar (left) and inspection of the ongoing hydroacoustic surveys in the hydroacoustic laboratory on R/V MARIA S. MERIAN (right).

Now we are all eager to start the planned work program of cruise MSM101 off Nova Scotia. We expect to reach the southernmost point of our first work area off Nova Scotia on Tuesday, June 22. Now that the routine business on board has settled in for all cruise participants, we all wish for this start to come and hope for

calm weather conditions with glorious sunshine and not too much fog during the day time along the Nova Scotia coast.

With best regards from the scientific and ship's crew on R/V MARIA S. MERIAN, now passing the huge Grand Banks shelf plateau off Newfoundland.