

The research vessel METEOR is a floating laboratory. Four hundred square meters of lab space, research winches equipped with various wires and cables up to 11 000 meters long, as well as various cranes and elevators enable the exploration of all oceanic regions on Earth. Thirty scientists can work round the clock in the best conditions, supported by an experienced crew. Working in safety is important for crew and scientists, but so is also a good social relationship...



“For over 80 years, the name METEOR has been synonymous with high quality German observational ocean research. Almost as well-known as Franz Beckenbauer or Mercedes-Benz...”
[Prof. Dr. Detlef Quadfasel,](#)
[University of Hamburg,](#)
[Centre for Marine and Atmospheric Sciences](#)



The Research Vessel METEOR has covered over a million nautical miles since 1986. She has travelled the North and South Atlantic from the Arctic to Antarctica, the Indian and Pacific Oceans, and also the Mediterranean and Black Seas. Around 7500 scientists have collected and analysed samples from 20 000 stations, from the air, the water column and the sediment layers. The sea floor was charted and geophysical measurements conducted. Nevertheless, now as before the deep seas remain almost unexplored – many more research expeditions are needed in order to better understand the ocean...

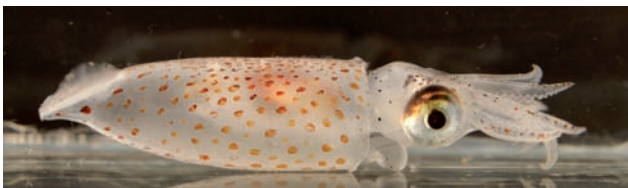


“Research and science, paired with seamanlike competence and knowledge – the guarantees of my trips with the RV METEOR.”
[Silke Janßen, technician, University of Hamburg, Institute for Hydrobiology and Fisheries Science](#)

Nature, Technology, Seafaring.

The most modern technology, the experienced seamanship of a motivated crew and the enthusiasm of scientists active in ocean research, all contribute to the smooth running of research operations, even under adverse external conditions. The scientists remain on board up to six weeks, crew members up to four months. During that time, the RV METEOR is a home for all.

Four of the crew members are under training or doing placements in nautics or naval engineering.



The floating town.

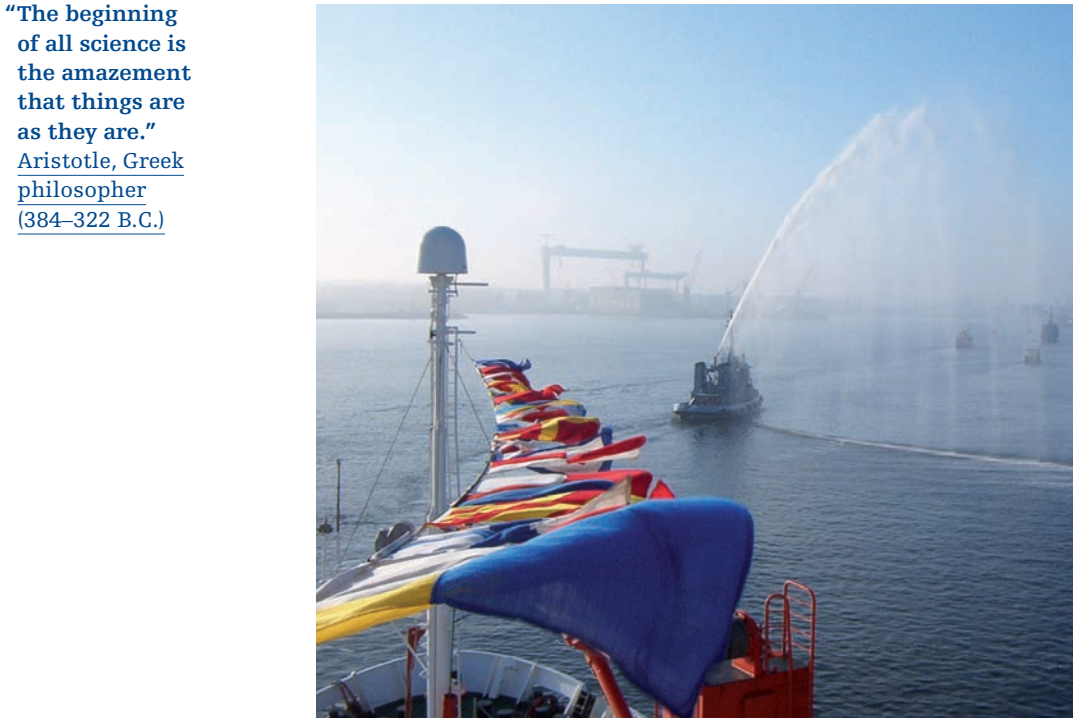
The ship resembles a small self-sufficient town, with its own power plant, environmentally friendly waste treatment, biological sewage treatment, production of drinking water and air conditioning.

Through the high environmental awareness of the crew and the use of modern technologies, the impact on the marine environment is minimised.

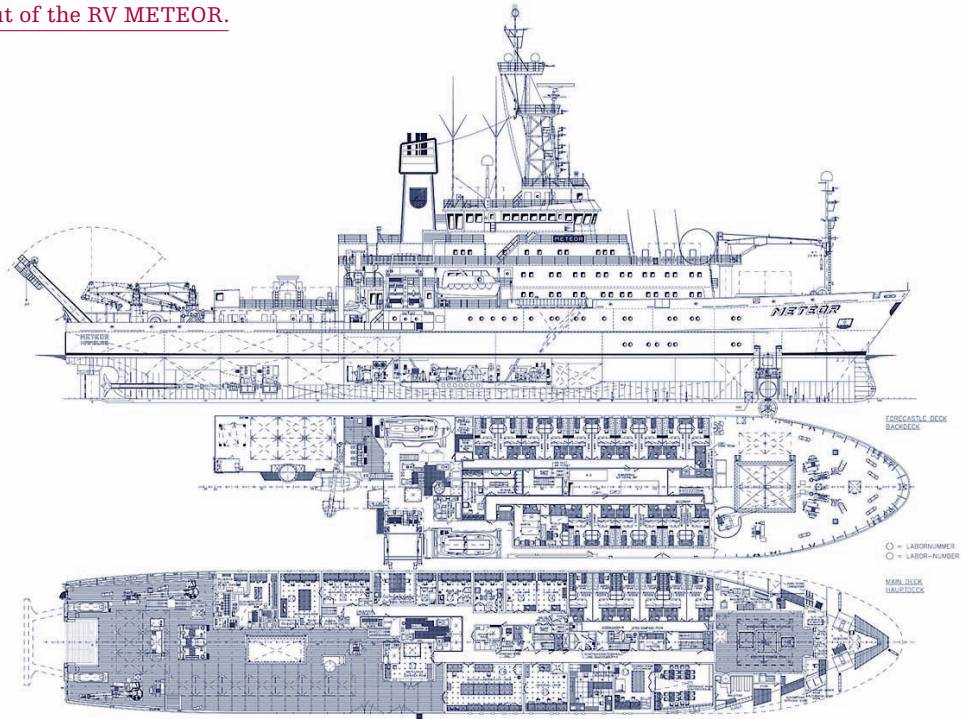
The captain is responsible for all on board and for the safe functioning of the ship, working together in mutual trust with the chief scientist.

Working with scientific instruments, on deck carrying out repairs, at the bridge or in the machine room: without specialised professionals, smooth operations on board the RV METEOR could not be guaranteed. And that has been so for over 80 years, in three different ships. The current RV METEOR has been sailing since 1986.

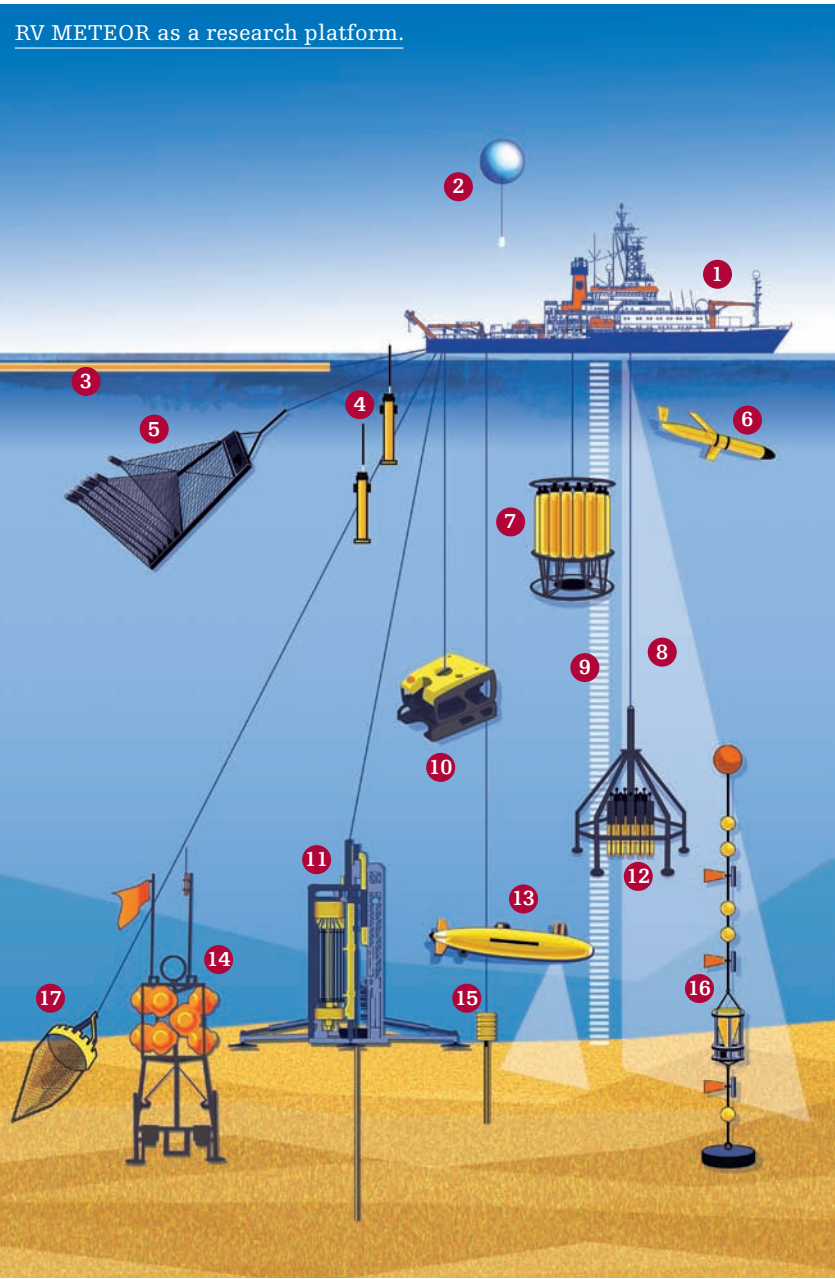




Layout of the RV METEOR.



RV METEOR as a research platform.



Legend

- | | | |
|---|--|--|
| 1 RV METEOR | 6 Glider (Oceanography) | 12 Multicorer (Geology, Biology) |
| 2 Weather balloon | 7 Water sampling rosette with sensors (Oceanography) | 13 AUV (autonomous underwater vehicle) |
| 3 Streamer with air guns (Geophysics) | 8 Multibeam echosounder | 14 Lander with autonomous lab |
| 4 Argo floats, autonomous profiling drifters (Oceanography) | 9 Sediment echosounder (Geology) | 15 Gravity corer (Geology) |
| 5 MOCNESS (Fisheries Biology) | 10 ROV (remotely operated vehicle) | 16 Mooring (Oceanography, Biology) |
| | 11 Sea floor drill (Geology) | 17 Dredge (Geology) |



One to two workers of the German Weather Service (Deutscher Wetterdienst, DWD) advise the captain and the chief scientist. They also collect meteorological data using, among others, weather balloons (see photo).



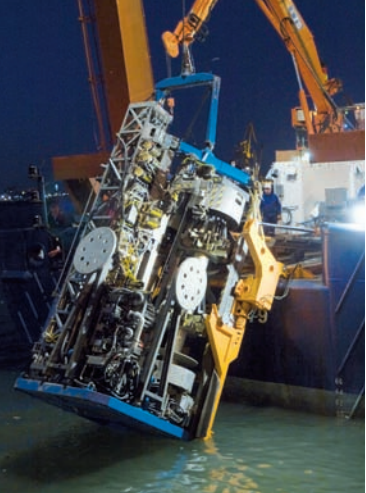
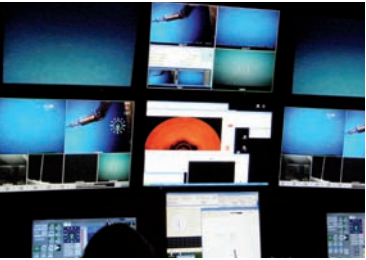
Research round the clock, in all weather.

The most varied scientific instruments are used for collecting samples. They generally belong to the work groups. Some instruments have used the same principles since the dawn of marine research, while others are highly modern developments. An example of the latter is the sea floor drill (MeBo), which operated from the ship can retrieve loose sediment and solid rock cores up to 50 meters long.

ROVs (Remotely Operated Vehicles) allow sampling in precise locations, the realisation of experiments and detailed observation of habitats. With no fixed link to the ship, AUVs (Autonomous Underwater Vehicles) operate near the sea floor, charting it in high resolution.

A classical instrument is the water-sampling rosette, which is used to sample the water column at specified depths. Sensors (CTD/RO) are attached to its frame to measure pressure, temperature and salinity, as well as other parameters. These measurements are the corner-stone of oceanographic studies.

The most modern echosounders are employed in charting the sea floor, and aid in surveying sampling locations.



IMPRINT
Publisher: University of Hamburg,
Leitstelle METEOR/MERIAN,
Prof. Dr. Detlef Quadfasel.
We are grateful for the permission to use
photos by the staffs of the University of
Hamburg, ifm-GEOMAR, MARUM, H. von
Neuhoff and crew of the RV METEOR.
Design: Jutta Drewes, Andreas Homann.
Translation: Nuno Nunes.

The Research Vessel METEOR.

The RV METEOR is a versatile research vessel. It is equipped to provide optimal conditions on board for scientists in all areas of ocean research to collect samples and analyse them, and to perform high quality measurements.

The owner of the RV METEOR is the Federal Republic of Germany. The ship is used year-round for research activities. Its operational costs are funded at 30 % by the Federal Ministry for Education and Research (BMBF) and at 70 % by the German Research Foundation (DFG).

The running of the ship is organised by the University of Hamburg, in close cooperation with its user groups and the shipping company F. Laeisz G.m.b.H.

Additional information on the research vessel METEOR is available at:
www.ifm.zmaw.de/leitstelle-meteormerian/



CHARACTERISTICS OF THE RV METEOR.

CONSTRUCTION YEAR 1986
BUILDER Schlichting Werft,
Travemünde
FLAG . . . German Federal Service
CALL SIGN DBBH
CLASS GL+100A5
E2+ MC AUT
FULL LENGTH 97.50 m
BEAM 16.50 m
DRAUGHT 5.61 m
GROSS TONNAGE 4 280 BRZ
SPEED 11 knots
RANGE 10 000 nm

PROPULSION
Electro-diesel, two electric
engines in tandem of 1 150 kW
each, four diesel generators of
1000 kW, extendible azimuthal
bow thruster of 1 100 kW,
stabilisation fins, articulated
fin rudder.

