



Standardization of meteorological data from offshore platforms

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The exploitation of renewable energy using offshore wind turbines will be a major emerging market in the future. In order to investigate conditions for offshore wind power generation in the German coastal areas, three research platforms were constructed in the North Sea (FINO1 and 3) and the Baltic Sea (FINO₂). Measurement masts at each platform are equipped with a range of meteorological sensors at heights of 30 to 100 m above sea level.

Comparison of wind data of all three platforms, measured simultaneously, suggests that a standardized analysis and interpretation of results will improve the knowledge of different marine ambient conditions.

In the FINO-Wind project, therefore, a standardization method will be developed. Recorded measurement data are checked automatically on the basis of a comprehensive checking routine. The quality control of the data is performed in a sequence of tests: The routine starts with a formal check, followed by climatological, temporal, repetition, and consistency checks. After the successful completion of each sequence, the data are assigned standardized quality flags. By default, 10-minute averages of data are processed.

We focus on wind data, which will be evaluated and analysed particularly with regard to mast effects and heat fluxes. In addition, the behaviour of wind fields is examined by taking the obstruction by wind parks into account. The project aims to provide an improved comparison of meteorological data from all three FINO platforms as well as consistent data storage.

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