



## **Comparison of large eddy simulations against observations for a nearly neutral stratification atmosphere. Wind energy application**

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Simulation of nearly neutral stratification is of special interest for wind energy application, particularly when considering the turbulent wind loads on a turbine, since such conditions are often approached during periods of high wind speed.

In order to get a better understanding of the mean flow characteristics (wind profile, . . .) as well as the unsteady effects (turbulence intensity, turbulence length scale, spectrum characteristics, coherence, gust factor, . . .) of the atmosphere, a LES simulation will be carried out for this stability condition and compared against observations using measurements from offshore FINO-1 platform located in the North Sea.

The verification of the model with in-situ observation is of high importance for checking the model performances, being a challenging task since no standardized criteria guiding validation exists.