



## **Variability in significant wave height and wave climate statistics**

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Significant wave height is used for validation of wave models, wave climate studies and extreme calculations. It represents an important parameter for design and operations of ships and offshore structures. Significant wave height is defined as an average of one third of the largest waves in a wave time series and is commonly evaluated using 20 or 30 minutes long recordings. It can also be calculated from a wave spectrum. Spectral methods often reduce the 20 minutes to 17.5 minutes. The shorter the time series is, the higher the variability is. In this study we show how much impact the measuring length has on validation of wave models and climate studies. Attention in the latter is given to extreme values which are of importance for marine structure design and operations.