



Radiosonde and satellite observations of topographic flow off the Norwegian coast

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Winds in Norway are strongly affected by the complex topography and in some areas the average wind speed in the fjords may exceed those on the coast. Such effects are revealed through a statistical analysis derived wind speed from ~8500 Synthetic Aperture Radar (SAR) scenes covering the Norwegian coast. We have compared the results with modelled winds from the operational atmosphere model at MET (horizontal grid spacing of 2.5km) and 3 years of measurements from “M/S Trollfjord”, a ferry traversing a 2400km coastal route between the cities Bergen and Kirkenes. The analysis reveals many coastal details of the wind field not observed from the meteorological station network of Norway. The data set proves useful for verification of offshore winds in the model. High temporal resolution radiosonde winds from two locations are used to analyse the topographic effects.