



Mesoscale flow structures in strong easterly winds over S-Greenland

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A case of strong easterly low tropospheric winds over S-Greenlands is explored with the help of aerial observations and numerical simulations. Locally strong winds are formed; a barrier wind along the east coast, a reverse tip jet, local downslope winds and severe turbulence aloft. With the help of numerical simulations, the dynamics of the flow are explained with reference to linear theory and non-linear effects and the climatology of extreme events of this kind is explored with the help of the ERA40 dataset. The present case is compared to recent explorations in the GFDEX experiment of the International Polar Year.