



The impact of temperature inversions on gravity waves and downslope windstorms

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In a set of idealised 3D numerical simulations using WRF, we systematically investigate the impact of temperature inversions and their elevation above ground on flow over and around a mountain. Our results from these simulations confirm the potentially substantial impact of inversions on mountain flow, that have previously been found both in real case studies and in the case of idealised simulations, that mainly have been performed in 2D. Based on the numerical simulations, a flow diagramme is presented, where the flow perturbations are shown as functions of strength and elevation of the inversions.