



## **Local orographic winds and surface roughness**

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A series of numerical simulations is carried out to investigate the impact of surface roughness on orographically generated winds. The simulations indicate that increase in surface roughness has greater decelerating effect on local orographic winds such as corner winds or gap winds than on winds that are not accelerated by mountains. Similar results are obtained for downslope winds. This difference is presumably associated with the fact that in local orographic winds, the vertical wind profile is different from the vertical profile of winds over flat land, but the fact that local winds are not geostrophically balanced may also play a role.