



## Are gravity waves important for climate?

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In stably stratified flow that impinges an obstacle, gravity waves are generated. In many parts of the world, the atmosphere is predominantly stably stratified and winds are persistent. Yet, gravity-wave dominated weather is considered to be an exception and gravity waves are generally not a part of the patterns described by wind climatology. This has been explained by the presence of surface friction in the real world, but friction has a destructive impact on gravity waves. Recent observations during FLOHOF over Hofsjökull glacier in Iceland and during the MOSO project in SW-Iceland as well as long-term numerical simulations of winds over glaciers in Iceland indicate that gravity waves are indeed a persistent feature of the low level wind climate in the real atmosphere. This may be related to the roughness being low over the ice and land with no trees.