

In the framework of the project 'INTERFACE' (Investigating the surface energy balance over mountain areas), financed by EUREGIO and conducted in collaboration with the University of Trento and EURAC a

PhD position in Mountain Boundary Layer research

Department of Atmospheric and Cryospheric Sciences, University of Innsbruck

is opened for three years.

The closure of the surface energy balance is one of the still un-solved problems in boundary layer meteorology. Even over homogeneous surfaces, there is a systematic 'non-closure' which cannot be attributed to instrumental biases. Recent results suggest that un-resolved meso-scale circulations may be the reason for the non-closure. Over mountainous terrain, where we do not even expect the (near-) surface energy balance to close due to intrinsically present spatial inhomogeneity, certain atmospheric conditions support the establishment of explicitly observable meso-scale circulations (valley wind, slope wind) so that their contribution can be studied using observable and significant data. In this PhD project, data from the University of Innsbruck's 'i-Box network' (i-Box stands for 'Innsbruck Box') will be used to study the surface energy balance in complex terrain, and to develop and test approaches in order to take advection processes and vertical inhomogeneity effects into account.

Applicants are expected to have a strong background in atmospheric sciences, with experience in boundary layer meteorology being an advantage. The work will be mainly data analysis and theoretical/conceptual derivations, but dedicated field work to address certain specific problems might be necessary.

INTERFACE is a project within TEAMx (<http://www.teamx-programme.org>), an international research program on transport and exchange processes in the atmosphere over mountains, in which the University of Innsbruck plays a leading role.

Further information can be obtained from

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Please send your letter of interest, full CV, name and contact of two references to the above address. Applications will be considered until May 29, 2022.