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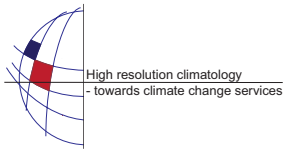

Impact of spatial heterogeneity of meteorological forcing on soil moisture redistribution over complex terrain

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An experiment was designed in order to capture the spatial heterogeneity of meteorological variables over a complex terrain.
The study area is located in the suisse Alps, close to the Gd-St-Bernard pass, in the upper part of the Val de Ferret. The catchment has a total area of 20 km^2 and the altitude ranges from 1777 m to 3206 m. Steep complex terrain, covered with snow from November to May and deep gullies are the main features of the study area.
15 meteorological stations equipped with soil sensors (moisture, suction and temperature) were deployed into a network spread over the study area to capture the heterogeneity of the meteorological forcing relevant to evapotranspiration processes and its impact on soil moisture distribution.
A soil characterization was also carried out to complement the understanding of soil moisture redistribution processes. Results assess that soil water content heterogeneity is highly affected not only by spatial variability of soil characteristics and morphology but also of precipitation.