



## **Eddy Covariance Measurements on a steep Mountain Slope**

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Eddy covariance measurements of carbon dioxide, water vapour and energy fluxes were made within the EU FP 5 project CARBOMONT (EVK2-CT2001-00125) above a meadow on a steep mountain slope in the Stubai Valley (Austria) during three campaigns in the vegetation period 2003. It was hypothesised that measured fluxes, despite the steepness of the slope (25 degrees), would be of comparable quality as compared to flat terrain, due to the low canopy and measurement height. The reliability of flux measurements was assessed by i) evaluation against common quality control criteria, ii) comparison with ecosystem chamber measurements of carbon dioxide fluxes, and iii) evaluation of the energy balance closure. In addition, flux measurements as well as quality control criteria are compared against measurements made on a nearby meadow site on extensive, flat, seemingly ideal, terrain in the valley bottom. It is shown that there is little difference, in terms of data quality, between flux measurements on the steep slope and level terrain. In fact, it can be shown that nighttime flux measurements are less problematic on the slope, due to higher levels of nighttime turbulence, compared to the site on the valley bottom.