



Advection of latent heat – a case study

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One of the advection experiments ADVEX within the CarboEurope-IP were conducted at Wetzstein (Germany, Thuringia) in 2006. The aim of ADVEX was to get deeper insight into the behaviour of the advective fluxes of carbon dioxide but the obtained data also offer the possibility to take a closer look at the advective fluxes of sensible heat and latent heat. The advection of sensible heat was calculated in another study. Now the advective fluxes of latent heat are inspected for the site Wetzstein more closely. The inspected days were carefully selected on the basis of available data for cross checking. Periods that add additional uncertainties (e.g. rainy periods) were excluded. Advection of latent heat is investigated in relation to friction velocity, wind direction and atmospheric stability. In a last step the budget of latent heat will be calculated including advective fluxes and compared to the budget of latent heat without advective fluxes.