



## **Uncertainties in gradient and profile method for trace gas flux calculations**

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Modelling and determination of surface layer turbulent fluxes are very important in analyses of surface layer profile (wind speed, temperature, moisture and trace gases) measurements, surface energy balance calculations as well as surface parameterisation for different scale environmental models. We analysed effects of uncertainties in choice of universal functions, roughness length on the calculations of surface layer trace gas fluxes based on Monin-Obukhov similarity theory with an idea to compare theoretical results with uncertainties in test data collected during 10 days long period. Direct and simultaneous measurements of momentum, sensible and latent heat fluxes using eddy covariance method as well as trace gases (O<sub>3</sub>, NO, NO<sub>x</sub>) profile measurements using 4m high gradient tower were done above grassland at Bugacpuszta micrometeorological station (Kiskunság National Park, Hungary) included in the EU6-NitroEurope program.