



Diagnostic turbulent fluxes retrieval by inverse parameter estimation

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A diagnostic expression for the available energy flux as function of air temperature humidity and wind speed and soil surface temperature is used to evaluate the turbulent surface fluxes of energy and momentum. Thus, an inverse method is applied to compute the unknown parameters in the cited expression (roughness lengths and soil surface resistance), based on a least squares approach. The turbulent fluxes are then calculated applying the flux profile relations and the energy closure budget. The procedure, that avoids the use of otherwise estimated parameters, is tested over field data.