



The Determination of the Aero Dynamical Parameters and Application in Land Surface Model at Maqu Area in the Up Yellow River

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Quantified understanding of aerodynamic parameters in meadow is of great importance in the model study. Using the observed turbulent data at Yellow River Water Resource Region Climate and Environment Comprehensive Observation and Research Station (abbr. Maqu Station) in September 2006, Martaon's method for estimating aerodynamic parameters by using of single-level sonic anemometer data is used. The results indicate that the displacement (d) is 0.143m and the aerodynamic roughness length (z_0) is 0.035m. The comparison of these results with other works at similar land surface shows that the displacement and the roughness length is in a reasonable range. And then, the aerodynamic roughness length and the zero plane displacement are applying to the land surface model CoLM, we evaluate the simulation ability of the CoLM about the heat flux. The results showed that the sensible heat flux and the latent heat flux are better than before.