EMS Annual Meeting Abstracts,
Vol. 6, EMS2009-531, 2009
9th EMS / 9th ECAM

9th EMS Annual Meeting
9th European Conference on Applications of Meteorology
High resolution meteorology
- applications and services

The effect of surface type on the decay of turbulence in the surface layer during evening transition

E.R. Pardyjak (1) and H.J.S. Fernando (2)

(1) University of Utah, Salt Lake City, UT, USA (pardyjak@eng.utah.edu), (2) Arizona State University, Tempe, AZ, USA

The decay of turbulence during the evening transition period is a complex processes that depends on competing physical processes. For this work, we use sonic anemometry data collected from a number of field experiments to investigate the effects of different surface types on the decay of the convective boundary layer and the subsequent stabilization of the surface layer. Surface layer length scales, turbulence statistics and spectra will be presented and the effects of various types of scaling will be discussed for a range of surface types including salt flats, plant canopies and urban canopy geometries.