Geophysical Research Abstracts, Vol. 8, 03945, 2006
SRef-ID: 1607-7962/gra/EGU06-A-03945


# Comparison of observed and estimated wind speed at 2 m height above the ground

**T. Likso** (1), K. Pandzic (1)

(1) Meteorological and Hydrological Service (likso@cirus.dhz.hr)

A comparison between observed and estimated wind speed data at 2 m above the ground for the Zagreb-Maksimir Observatory (Croatia) is presented. In order to estimate wind speed at 2 m height two theoretical approaches are used. As the hourly values of the wind speed at the reference height (10 m) are available from standard observations, the wind speed at 2 m is usually estimated. For this reason a slightly modified version of Prandtl's relationship for measured velocity distributions in boundary layer, approximately represented by a power law, is used. Another approach is based on the logarithmic profile law for atmospheric surface layer in order to estimate the wind speed at the mentioned level. For this purpose the wind speed data from the period 2004-2005 for two levels (2 m and 10 m above the ground) have been used. The results indicate that differences between observed and estimated values of the wind speed at 2 m above the ground are dependent on weather conditions, especially on atmospheric stability. As the roughness of the Observatory environment is not homogeneous in all directions, there is a possibility that these theoretical estimations are dependent also on wind directions.