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Determination of surface layer parameters at a suburban area of Zagreb in Croatia

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Vertical wind and air temperature profile related parameters in the surface layer at the edge of a suburban area of Zagreb Capital in Croatia has been studied. For that purpose, adopted Monin–Obukhov similarity theory and a comprehensive Campbell Scientific Inc. observation system of wind and air temperature at 2 and 10 m above ground, recorded since 2013, have been used. The results confirmed estimation of effective roughness lengths dependent on eight wind direction sectors indicated before. Gratefully to that achievement, a representativeness of wind data at standard 10-m height can be clarified more deeply for an area of at least about 1 km in upwind direction from the observation site which can be used in numerical weather prediction or atmospheric pollution modelling.