



## **Similarity relationships for velocity and temperature moments in the atmospheric boundary layer**

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The Monin-Obukhov similarity theory and related theoretical approaches suggest that the moments of the Eulerian probability density functions of velocity components and temperature must be dependent on the height above the ground, the Monin-Obukhov length, and the boundary layer height, given proper velocity and temperature scales. Homogeneity and steadiness conditions are required. Recent developments suggest the need to account for a few more parameters, at least for stable boundary layers.

Relations for the first moments of velocity and temperature are derived from data obtained by sonic anemometers, referring mainly to the surface layer.

The results are discussed in the frame of the homogeneous and steady conditions paradigm. Some hints about the effect of inhomogeneities around the measurement site are presented.