A new approach to characterize coherent structures in the atmospheric surface layer

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The Importance of Coherent Structures in Atmospheric Turbulence



Model-based Feasibility Studies

LES Modell

Development of scan strategies and objective detection methods









Results:

 Proof temporal and spatial resolution is high enough •Optimized scan strategies and applicable detection algorithms •Link to so far used tower technique

Experimental Approach



Implementation of a Dual Doppler System, which is able to measure

- at every point in the upper hemisphere in a radius of ~ 10 km
- highly synchronized



