

**Near-surface Turbulence in a Neutral Planetary Boundary Layer: Comparison of LES with the CASES'99 Experiment Observations**

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This work compares the results of the field experiment CASES'99 with an idealized LES simulation performed with Méso-NH. This comparison is done for an atmosphere in neutral stability conditions. The conditions are set so that the LES reproduced as well as possible the friction velocity, the ground roughness, the inversion height, and the geostrophic wind of the real case, and energy profiles and flow patterns of the real case and the LES are compared, showing a good agreement. In particular, the LES shows the formation of near-surface streaks spaced of approximately 390 m, in agreement with high resolution Doppler lidar radial velocity recorded in CASES'99, which shows evidence of an approximate spacing of the streaks of 315 m.

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