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Characterization of evening atmospheric boundary layer transitions from a sonic anemometer and an array of microbarometers during the BLLAST field campaign

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This work focuses on the characterization of the transition which begins in the atmospheric boundary layer before sunset.
Data from the BLLAST field campaign are used to analyse different aspects of the atmospheric late afternoon and evening transition in the lower atmosphere. This international campaign took place from 14th June to 8th July 2011 at the Atmospheric Research Center (CRA, for the French name) in Lannemezan, France. This location is quite close to the Pyrenees mountains, so that the influence of nearby complex terrain can be explored.
In the present work we will focus on data from a triangular array of high resolution microbarometers (2 Hz) and a sonic anemometer (20 Hz). Turbulent and stability parameters, as well as multiscale methods (Wavelet and MultiResolution Flux Decomposition) are used to study the behaviour of the various transitions observed during the campaign, to analyse the different scales present along the transition and to explore the presence of wave-like disturbances and their interaction to turbulence.