



Study of coherent structures from different observational sources in SABLES 2006

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The detection and characterization of different coherent structures (Kelvin-Helmholtz instabilities, gravity waves, etc) was one of the main objectives of SABLES 2006 (Stable Atmospheric Boundary Layer Experiment in Spain 2006) field campaign, which took place from 19 June to 5 July 2006 at CIBA (Research Centre for the Lower Atmosphere), located on a fair and homogeneous terrain over an extensive plateau in the center of the Spanish plateau. In this work we use the different instrumentation available or deployed during the campaign, such as data from a 100-m meteorological tower (including cup and sonic anemometers, thermometers and wind vanes at different levels), tethered balloon soundings, a triangular array of microbarometers, and different techniques (evaluation of turbulent and stability parameters, wavelet transform, multiresolution flux decomposition, etc) to study in depth the knowledge of the processes taking place in the Nocturnal Boundary Layer (NBL). It will be shown the characteristic parameters (wavelength, phase speed, periodicity and direction of propagation) from some of the most prominent events detected during the campaign, and the background conditions linked with these events will be analyzed.