



Temperature Auto-correlation and Spectra functions in low-wind conditions.

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During Low-Wind speed episodes, when the mean wind velocity falls below 1.5 m/s, the horizontal wind vector shows a characteristic meandering behaviour and the auto-correlation and spectra functions of the wind velocity components clearly identify a meandering time-scale (Mortarini and Anfossi, 2014). This time-scale is larger than the one associated to turbulence, suggesting that the meandering phenomenon may be connected with sub-mesoscale motions. In this work the auto-correlation and spectra functions of the temperature field in low-wind episodes are investigated through the analysis of sonic anemometer observations to show that also the temperature field presents an oscillating behaviour. Two different dataset are analyzed: a urban-sub urban dataset, UTP (Mortarini et al., 2013, Trini Castelli et al., 2014) and an open field dataset (Acevedo et al., 2014).