



Characterizing PBL at a Mediterranean coastal site

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The inversion height at the top of the marine mixed layer, or the mixing height, z_i , is one of the key parameter in atmospheric modelling i.e. in transport models it is used to scale to predict pollutant concentrations, and for boundary layer process studies to characterise its vertical structure and the interplay of processes at different spatial-temporal scales since z_i was found also to influence processes in the marine surface layer. From studies in the north European seas, the height of the marine mixed layer has been found to vary with season and a second inversion is often found above it.

Here, we present the analysis of three year radio soundings taken at the Italian coastal site of Pratica di Mare, close to Rome. Statistics of the height of the mixed layer above sea is compared with temporal variation found over land depending on wind direction. Moreover, radio soundings from oceanographical campaigns have also been analysed and compared with results at the coastal site