

Interactive comment on “Study of the overturning length scales at the Spanish planetary boundary layer” by P. López and J. L. Cano

Anonymous Referee #1

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The paper is addressing a very interesting topic that can have a deep consequences in modelling the ABL. The problem is well exposed and carefully documented by chosen references. The obtained results seem to bring a little more complexity to the problem by obtaining power-law, rather than linear relations between the considered length scales. Also the day-time versus nocturnal period separated statistics seems to be a reasonable approach.

When it comes to results, the only thing that puzzles me are the breaks in time series of measured data. These breaks were explained, but I was wondering how these gaps in data could have affected the results and conclusions. It means, would we get somehow different results with complete data, or inversely, would the other authors get different results if they will also have such gaps in data?

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From technical point of view, I don't like the figures at the end of the paper (which makes it harder to read), but this is probably just the manuscript style, not a choice of authors. There are few misspelled words in the text, which is easily fixable in the final version of the paper. A little annoying for me was also the use of expressions "P value is ...", "R-squared coefficient is...", "F test for ...", which is probably some common notation use by someone in certain branches of statistics, but for a technical (physical) paper, these terms (and notation) should be explained or rather properly referenced.

Interactive comment on Nonlin. Processes Geophys. Discuss., 2, 1531, 2015.