Review report on the revised version of the paper **“Instabilities, Dynamics, and Energetics accompanying Atmospheric Layering (IDEAL) Campaign: High-Resolution in situ Observations above the Nocturnal Boundary Layer”** by Doddi et al. submitted to the journal Amospheric Measurement Techniques.

Overview

The authors have answered most of my questions and objections satisfactorily. The structuring of the article is much improved, as is the quality of the figures. Useful clarifications have been added. The list of references has also been completed.

However, I still regret the absence of an evaluation of the impact of instrumental noise. Except for the position of the fitting line on the PSDs, no error bar is indicated, either on the measurements (T, velocities), or on the deduced quantities (theta, N2, Ri, epsilon, CT2). Taking into account the instrumental noise would certainly be a plus for such a paper presenting data and analysis methods. About the only error bar shown, on the fit of the -5/3 slope line on the PSDs of T and v, how is it estimated? (it is not an uncertainty on the slope of the line since it is fixed a priori).

Conclusion: in view of the improvements made to the manuscript, I consider that it can be published in AMT. I recommend, however, to include a consideration of instrumental noise, either by specifying the uncertainties on the measurements and the inferred quantities (could be done in the text), or by explaining why it is not possible to estimate them.