

Response to reviewers' comments

We would like to thank the reviewers for their time, and their evaluations of this paper. We have carefully read these comments (shown here in grey text) and address them here (black text). The additional text to be added to the manuscript is shown in blue.

Reviewer #2

The manuscript describes simulations of downbursts with a LES model and tries to identify the influence of the stabilisation of the thermal stratification of the surface layer during the evening transition on the strength of these downbursts.

The paper is well written and understandable and does not contain any obvious errors. The introduction is rather long and has got a review character which covers more than that what is necessary to understand the content of the manuscript.

We thank the reviewer for these comments and for the review of our paper.

The only shortcoming - to the estimation of the reviewer - is that the simulated peak wind speed of roughly 35 to 38 m/s is not compared to the vast body of literature mentioned in the introduction.

We agree that the maximum simulated wind speed of 35 to 38 m/s ought to have been compared with other simulation studies as well as with observed downbursts in order to bolster the validity of these simulations.

To emphasize this, the following sentence has been added to the revised manuscript:

“The maximum wind speeds of 35--38 m/s are consistent with strong observed downbursts: 25--30 m/s in Wakimoto (1985); 32 m/s (with theorized maxima in the F3 range of 70-92 m/s) in Fujita (1981); and 67 m/s in Fujita (1985). Furthermore, other simulation studies have reported similar wind speed maxima of 38 m/s (Orf et al. 2012), 35 m/s (Anabor et al. 2011), 57 m/s (Mason et al. 2009), 35--65 m/s (Oresekovic 2016), 24--32 m/s (Orf and Anderson 1998), and 47 m/s (Vermeire et al. 2011).”

Otherwise, the manuscript may be published as is.

We thank the reviewer for these comments and for recommending publication of this work.