

Response to Anonymous Referee #1

Minor

The authors state that the altitude resolution is 300~m yet Fig. 4c shows a double layer structure with 200 m distance and 80 m width. Maybe the vertical grid is higher and the profiles were smoothed with a 300~m window?

Thank you for bringing that to my attention! Indeed, while the resolution is 300 meters, the color brightness in the plots depicted in Figure 4 is dependent upon the signal-to-noise ratio of the received PMSE. In selecting the color bar for the plots, we aimed to show the up- and down-drafts prominently while preventing color oversaturation. Furthermore, the values undergo interpolation, contributing to the perception of a higher range resolution. However, when plotting solely the velocities or the signal-to-noise ratio from the uploaded plot data, the actual resolution becomes more evident.

In l. 148 "(yellow vertical lines)" is missing.

Thank you! We added it.

In contrast to the response document, no paragraph was added from line 280.

Thank you very much for the comment! It was forgotten to remove this answer from the final response, we are sorry. We decided to leave this paragraph out completely.

I do not fully understand the discussion following my remark that it says "kilometer-scale" in the title but that no horizontal dimensions are estimated in the text. Is the argument that the horizontal wind is zero on average? Is that realistic? I still feel some deduction of horizontal scale should be included in the text when "kilometer-scale" is stated so prominently in the title.

The term "kilometer-scale" does not correspond to the fact that the velocities are so small. We are using this wording because earlier research showed these structures are kilometer-sized (Chau et al. 2021). In our study, we are using the term "Kilometer-scale" to connect our findings and our paper to what was found before.

To make it more clear to the reader we added additional information in line 64: *"Figure panel c illustrates a two-dimensional plane from radar imaging, offering spatial information on the event. The up- and downdrafts exhibit clear localization both horizontally and vertically, measuring 3–4 km in width along the x-axis and extending at least 8–12 km along the y-axis."*

and in line 86:

"(referring to the spatial information taken from the radar imaging of the extreme event by Chau et al. 2021).