



## *Corrigendum to*

# **“The climatology and nature of warm-season convective cells in cold-frontal environments over Germany” published in Nat. Hazards Earth Syst. Sci., 23, 3703–3721, 2023**

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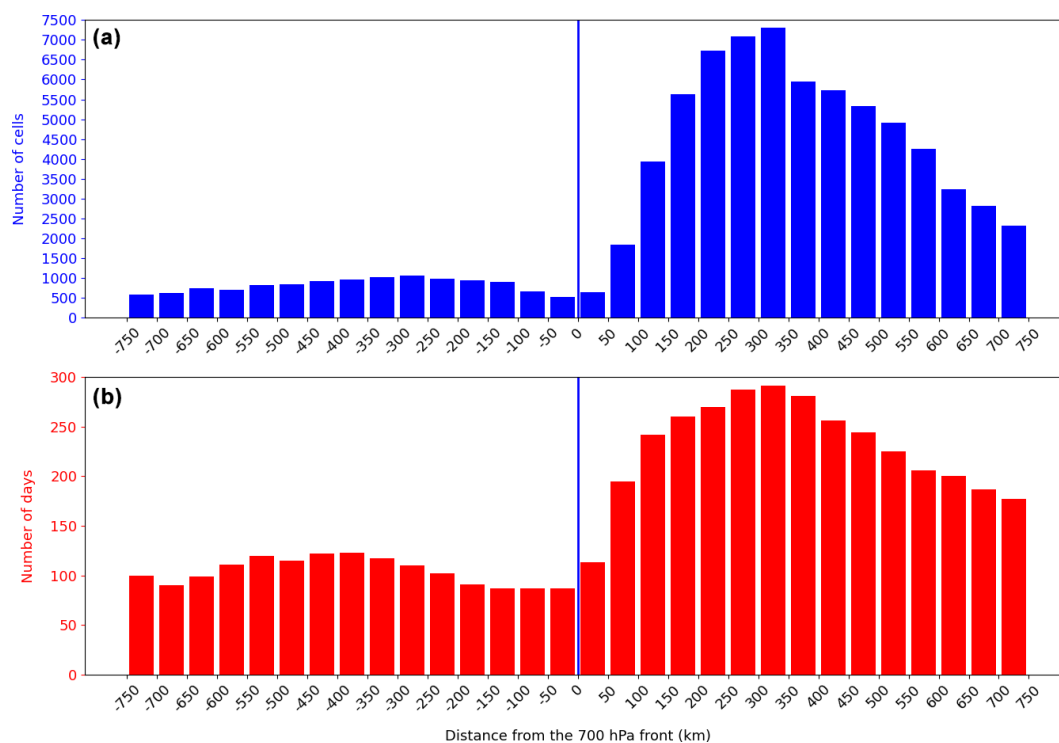
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Due to an error in the distance calculations between the convective cells and cold fronts, we provide corrected versions of the affected figures for the reader’s information. The error was already present in the original submission of the manuscript. In general, the error led to cell-front distances being overestimated in the original paper, especially at larger distances from the front (e.g. 750 km away from the 700 hPa front). However, the conclusions drawn in the paper are not significantly affected by this calculation error.

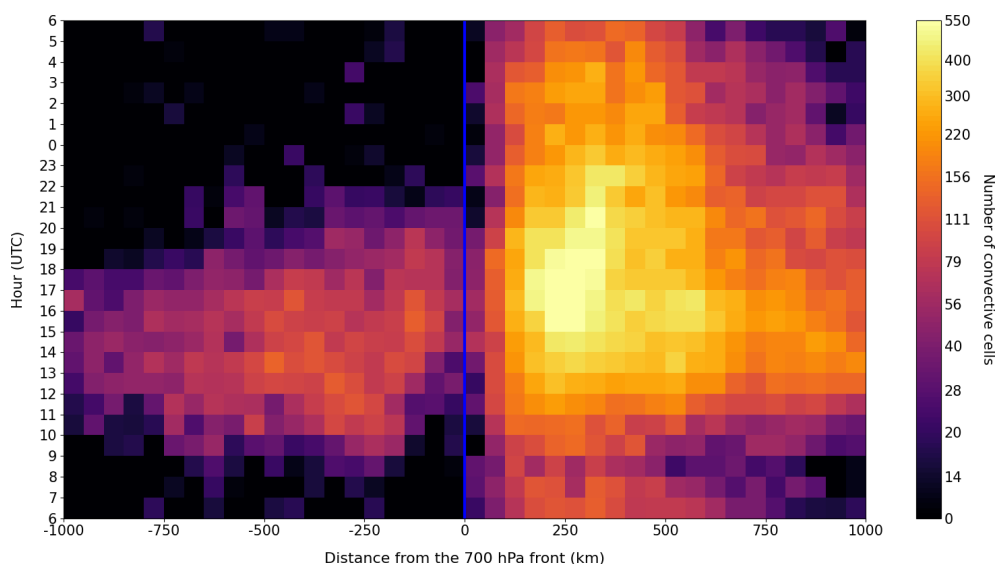
Regarding the cell frequency shown in Fig. 5, the maximum cell frequency is between 300–350 km ahead of the 700 hPa front, whereas it was quoted as 350–400 km in the original paper. At distances further ahead of the front, the cell frequency is lower than shown in the original paper; there is no secondary maximum.

Regarding the diurnal cycles, there are no significant differences; one can only note that the maximum cell count is closer to the front.

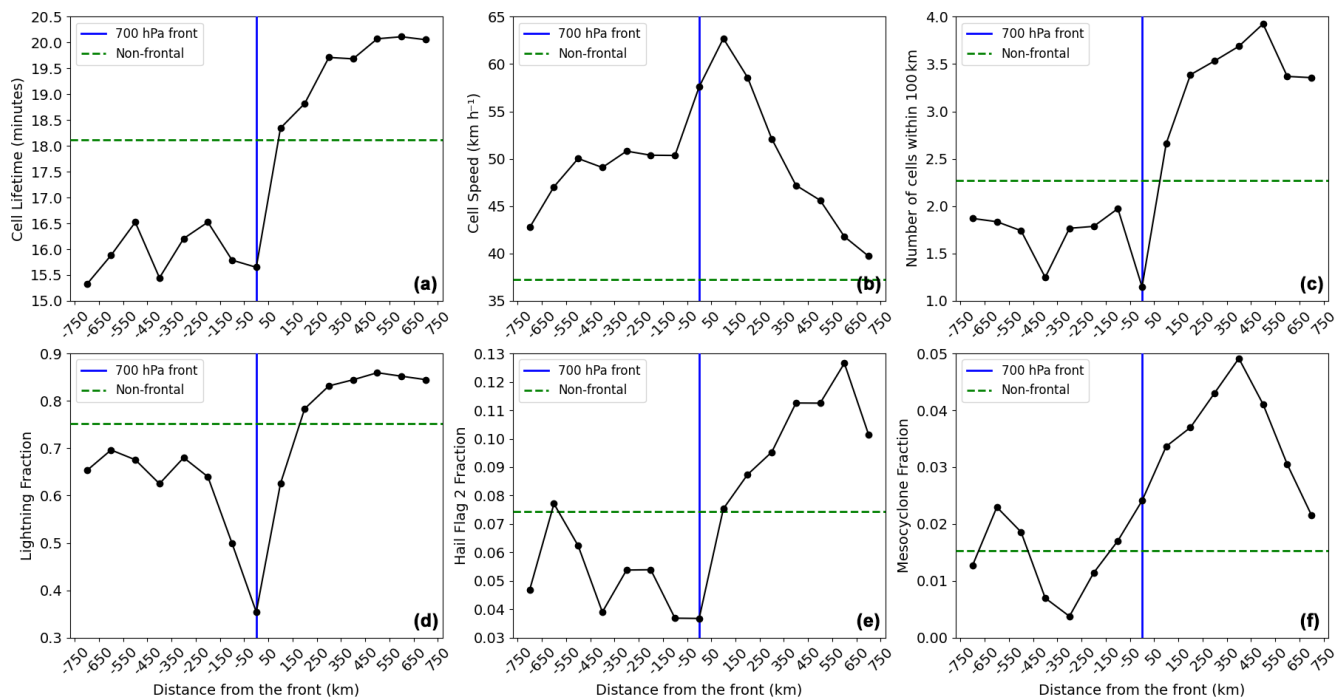
In the final figure of the paper, the main difference relates to the mesocyclone frequency (Fig. 11f) in the pre-surface-frontal zone (300–750 km). Cells are most likely to develop a mesocyclone 350–450 km ahead of the 700 hPa front. Further ahead of the front, there is a decrease in the fraction of cells with mesocyclones but the fraction remains above the non-frontal fraction. This decrease is not present in the original paper. The interpretation of all other results is not affected since the mesocyclone definition is only used in Fig. 11f.



**Figure 5.** Number of convective cells (a) and number of convective cell days (b) depending on the cell-front distance. Positive and negative distances represent the pre-700 hPa frontal and post-700 hPa frontal environments, respectively.



**Figure 6.** Number of convective cells (non-linear colourbar) depending on the cell-front distance (horizontal axis) and hour of the day (vertical axis). Negative distances indicate post-700-frontal cells, while positive distances indicate pre-700-frontal cells.



**Figure 11.** Mean cell lifetime (a), mean cell speed (b), mean number of cells within 100 km of cell centre (c), fraction of cells with lightning (d), fraction with hail flag 2 (e) and fraction with mesocyclones (f) depending on the cell-front distance (km). The dashed green line represents the non-cold-frontal cells fraction for reference.