

Interactive comment on “Ambient conditions prevailing during hail events in central Europe” by Michael Kunz et al.

Anonymous Referee #2

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The manuscript is well-written, correctly structured and methodologically sound. It lies within the scope of Natural Hazards and Earth System Sciences, as it considers the detection and modelling of a natural hazard (hail), with severe socioeconomic impacts. The authors present an empirical study with clear objectives, which involve the association of Severe Convective Storms (SCS) to fronts, the differences in the characteristics of frontal SCS differ to the non-frontal ones, the effect of environmental conditions to hail diameter and track lengths and weather the propagation direction of hailstorms is associated to hail size. Overall, the manuscript is of high quality and should be considered for publication in Natural Hazards and Earth System Sciences with few minor suggestions for revision presented below.

Figure 1: Consider splitting the Figure to two, as in Figure 4. In this manner, the spatial

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patterns in Germany will be easier to detect and present (color scale).

L298: Seeing Figure 5, one might think 50-150 km class should be used instead. Is there another reason for choosing a 50-100km class?

L353-354: It would be less confusing to define the classes as $D < 3\text{cm}$, $D < 75\text{km}$ and $D > 3\text{cm}$, $D > 75\text{km}$.

L356, L370: Figures 10 & 11 are the other way around.

L365-382: Perhaps consider removing this section. It does not contribute much to the findings and overall discussion and could be misleading. Statistical evaluation needs to be addressed also in terms of uncertainty analysis, which is not quantitatively presented in the manuscript.

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