**Natural Hazards
and Earth System
Sciences**

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Discussions

# Interactive comment on "Day-time identification of summer hailstorm cells from MSG data" *by* A. Merino et al.

**A. Merino et al.**

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The authors would like to thank referee 2 for taking the time to review and offer their comments/suggestions to improve this paper. We think the review was very good and it has improved the paper substantially. We have modified the paper according to their comments and suggestions. We would like to draw attention to the following points:

1. In this study, hail size was not evaluated. Several studies have indicated the difficulties involved in identifying hail size using convectional radars. We think the geostationary meteosat data can not provide information about the melt processes occurring below the base cloud that are important in the final size of hail registered. In this paper, the term "severe" was used in relation to convective cells with strong updrafts and

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therefore with a likelihood of hail, but to avoid confusion we have removed this word in several sentences, as in this study the severity of hail was not evaluated.

8. This equation is right. We would point out that this equation can have values different to -1/0/+1, but in order to extract the sign of each variable with interactions it is necessary to combine their beta coefficients, and the sign of this result will be the sign of this variable in the model. To avoid confusion the word "sign" was added on the other side of the equation and this point was explained more widely.

10. To avoid confusion we have removed the word "severe". We would point out that convective cloud with strong updrafts is shown in bright yellow in the "Convective Storms" scheme. Usually, cumulonimbus clouds with strong updraft are associated with severe weather, and in this case with hailfalls.

21. We agree with the reviewer that the information provided about the meteorological conditions of the case study is rather limited, but the aim of this point is to apply the model to one example case study. The most important thing here is that extensive hailfalls occurred in the study area.

22. We have decided to remove the term "severe", as in this study the severity of hail was not evaluated.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 5453, 2013.