

Interactive comment on “Characterization of Mediterranean hail-bearing storms using an operational polarimetric X-band radar” by G. Vulpiani et al.

Anonymous Referee #5

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This paper analyses in detail two storms using primarily polarimetric radar data at X-band. The paper is clear and well written and the cases are a nice illustration of X-band polarimetric data signatures of storms to add to the increasing literature corpus. I have no major objections to the publication of this article once its English is revised.

General comments: 1. I would like the authors to comment on the influence of the backscatter co-polar differential phase, $\Delta\phi_{co}$ in their retrieved K_{dp} and Φ_{hidp} . If I understood correctly the methodology if $\Delta\phi_{co}$ is not filtered properly it may result in an overestimation of Φ_{hidp} all along the path after the area of significant $\Delta\phi_{co}$.

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Specific comments: Through the article the language should be revised. I note here only some of the errors I have spotted.

Page 7203 Line 23: ... the same type of radar ... Page 7203 Line 24: ... discrimination between ... Page 7203 Line 25: ... If the objective ... Page 7205 Line 13: .. be used by the forecaster ... Page 7208 Line 1: ... for attenuation correction ... Page 7210 Line 15: ... moved south-east ... Page 7210 Line 15: ... intense precipitation cores ... Page 7210 Line 19: ... which mainly affects the ... (revise use of past and present through the text) Page 7210 Line 21: ... presence of a hail nucleus.Despite that the adopted ... Page 7211 Line 25: ... originated around 04:00 UTC and lasted ... Page 7211 Line 25: ... Also in this case, ... Page 7212 Line 10: ... the storm reaches ... Page 7212 Line 19: ... of the polarimetric radar ... Page 7214 Line 17: ... possible to reconstruct the storm characteristics in a satisfactory way, ...

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