

Interactive comment on “Numerical simulation of a winter hailstorm event over Delhi, India on 17 January 2013” by A. Chevuturi et al.

Anonymous Referee #2

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This is an important study and should be published. Followings are minor comments and suggestions:

Section 3.2 (2nd paragraph, line 20): it is mentioned that “...Graupel precipitation or sedimentation is not observed.but hail precipitation...”. Is the graupel precipitation and sedimentation are same thing? When hail precipitation is mentioned, is it mean the rainfall from hail microphysics scheme or rainfall is in the form of hail hydrometeors. Or Fig.9 the comparison shown is between the rainfall outputs from two different schemes. In the model configuration, whether the cumulus scheme is active in the inner most domains (1/3/9km)?

Model run have happened at 27/9/3/1 km respectively (Section 2). In figures, plots

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were shown identifying it as “model out”, is this the output from 1km run or 3km ? For example in fig.4 it is mentioned the model output with hail option/graupel option at 27km but in fig.5 (and in other figures) it is mentioned just the “model output” with hail option, so is it the same 27km or 9/3/1 Km. Author should mention the resolution of the model output compared with analysis in each figure.

How moisture transport were calculated in analysis and from the model or provide reference. Fig.6, precipitation has been compared with MERRA, it would have been robust, if an observed product such as TRMM used for comparing precipitation (Fig.6). Though TRMM data was mentioned in section.2, perhaps it is not used for comparing results.

Fig. 11 vertical winds (+ve/-ve) mentioned, mention signs refer to upward or downward motions. Fig.9 Hail precipitation is shown at 27km. It is better to show result at higher resolution (3/1 km)

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