

# ***Interactive comment on “Impact of airborne cloud radar reflectivity data assimilation on kilometre-scale NWP analyses and forecasts of heavy precipitation events” by Mary Borderies et al.***

## **Anonymous Referee #1**

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The results in this study contribute to our understanding of data assimilation method and the manuscript could be considered for publication following revisions.

Please explain the subscript  $i$  in Equation (1).

In the bias correction method, the bias is given by  $b = \langle Z^o - y^{p^o} \rangle$ . However, the innovation is defined as  $Z^o - H(x)$  in the cost function  $J_{p^o}$ . The authors need to show the histogram (or mean error) of the bias corrected innovation.

Please explain the notation of  $r_q^o$  and  $r_q^m$  in Figure 3.

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2018-314>, 2018.

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