

***Interactive comment on* “Direct evidence for secondary ice formation at around -15°C in mixed-phase clouds” by C. Mignani et al.**

Anonymous Referee #1

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Thanks very much for your response concerning the uncertainty in the ice multiplication factor estimate given your sample. My concern is more related to the uncertainty in the representativeness of your sample for the population. Assuming that "the population" here is ice in a mixed-phase cloud, then you can estimate the population size .. say conservatively that the cloud is 2 km deep and has an equivalent radius of 3 km, then it already has a volume on the order of 10^{10} cubic meters. Even if the ice crystal concentration in the cloud is only a crystal per cubic meter, you have sampled a very small portion of the population for which you are making a conclusion. This is how I am thinking, but I understand that there are all sorts of subtleties related to representativeness and that your collection process is laborious, so let us see what other reviewers say.

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-829>, 2018.

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