Answer to the editor's comments

We thank the editor for the grammatical corrections in abstract. The editor's comments are in blue, and our answers are in black. Sections from the original manuscript are presented are in *black italic* and corrections in *red italic*.

Authors,

Thank you for revising the abstract and conclusions along the lines of what I suggested in the previous decision. I know how challenging it can be to cut valuable text out of an already finished abstract. I'm happy with your additions and for the manuscript to proceed to publication.

As I read your revisions, I made grammatical edits to two sentences in the abstract.
- "However, for a qualified implementation of INPs in models, measurement techniques able to accurately detect the temperature-dependent INP concentration are needed."
- "Although a variety of different measurement principles were used, the majority of the data show INP concentrations within a factor of 5 of one another, ..."

You can consider whether these changes are helpful or not. Otherwise, please proceed to upload your final documents for typesetting, as to be guided by the Copernicus staff.

Best regards, and Happy New Year.

Alex Huffman

We follow the suggestions of the editor and make the grammatical corrections in the abstract:

Ice crystal formation in mixed-phase clouds is initiated by specific aerosol particles, termed ice-nucleating particles (INPs). Only a tiny fraction of all aerosol particles are INPs, providing a challenge for contemporary INP measurement techniques. Models have shown that the presence of INPs in clouds can impact their radiative properties and induce precipitation formation. However, for a qualified implementation of INPs in models, measurement techniques able to accurately detect the temperature-dependent INP concentration are needed. Here we present measurements of INP concentrations in ambient air under conditions relevant to mixed-phase clouds from a total of ten INP methods over two weeks in October 2018 at the Puy de Dôme observatory in central France. A special focus in this intercomparison campaign was placed on having overlapping sampling periods. Although a variety of different measurement principles were used, the majority of the data show INP concentrations within a factor of 5 of one another, demonstrating the suitability of the instruments to derive model-relevant INP data.
Lower values of comparability are likely due to instrument-specific features such as aerosol lamina spreading in continuous-flow diffusion chambers, demonstrating the need to account for such phenomena when interpreting INP concentration data from online instruments. Moreover, consistently higher INP concentrations were observed from aerosol filters collected on the rooftop at the Puy de Dôme station without the use of an aerosol inlet.