

Interactive comment on “Opinion: Cloud-phase climate feedback and the importance of ice-nucleating particles” by Benjamin J. Murray et al.

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I enjoyed reading this opinion paper. It nicely brings together a number of issues in a call for concerted research to reduce uncertainties regarding feedbacks between climate change, ice-nucleating particles (INPs), and cloud phase and albedo. One issue that I was missing is the effect of rain on the emission of biological INPs (e.g. Bigg & Miles, 1964; Huffman et al., 2013; Hara et al., 2016; Conen et al., 2017; Bigg et al., 2018; Mignani et al., 2020). I thought this issue would be an obvious target for a concerted research effort. Apart from rising temperatures, climate change includes altered precipitation patterns. While, for example, the Mediterranean region is expected

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to become dryer, large parts of Siberia will probably experience wetter conditions by the end of this century. Will taking the effect of precipitation on INPs into account not amplify the expected changes in precipitation, with repercussions on model-predicted cloud cover in affected regions?

References

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