

## ***Interactive comment on “Organic matter matters for ice nuclei of agricultural soil origin” by Y. Tobo et al.***

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This is timely study for ACP which shows the importance of organic matter on the ice nucleation properties of agricultural soil dust. The study appropriately shows that the ice nucleation properties (under mixed-phase cloud conditions) of natural desert dust samples or clay samples are not influenced by organic matter.

In this study the frozen fraction and ice nucleation active site (INAS) density for kaolinite (CMS, KGa - 1b) are presented. While the authors have compared the INAS densities to the fit derived for natural desert dust from Niemand et al. (2012, Journal of Atmospheric Sciences), it would be informative to see a comparison to the INAS for KGa-1b that was derived for the same temperature regime and mixed-phase cloud

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conditions reported in Kanji et al. (2013, ACP) and it would be interesting if the authors could discuss any differences/similarities in comparing the INAS density for KGa-1b reported here to that reported in Kanji et al. 2013.

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