

Supplementary Information For:

The relevance of nanoscale biological fragments for ice nucleation in clouds

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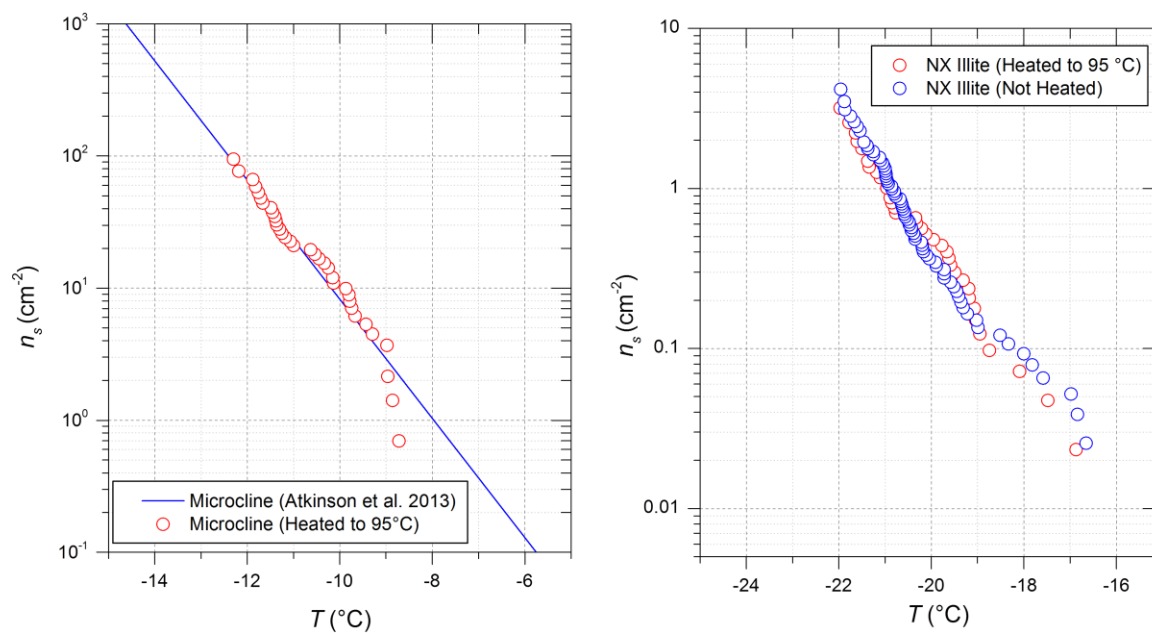


Figure S1: Ice active surface site densities for potassium feldspar (microcline) and NX illite before and after heating of the suspensions to 95°C for 45 minutes. The parameterization for unheated microcline is taken from Atkinson et al. ¹, where full details of the mineralogy for both samples used can be found.

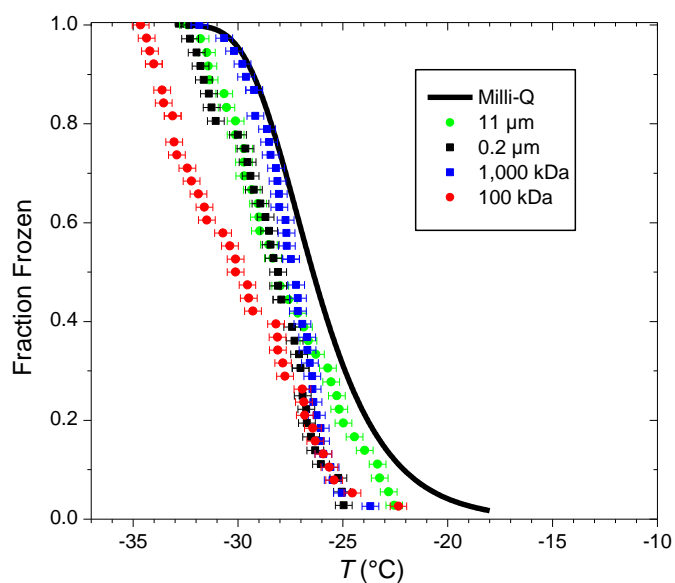


Figure S2: Fraction frozen data for Milli-Q water after it has been passed through the filters used in the following study. Illustrated are data for the 11 μm , 0.2 μm 1000 kDa and 100 kDa filters employed. Also shown is the fraction frozen curve for Milli-Q water derived from the best fit line to the cumulative nucleus spectra of 23 separate experiments (737 drops in total).

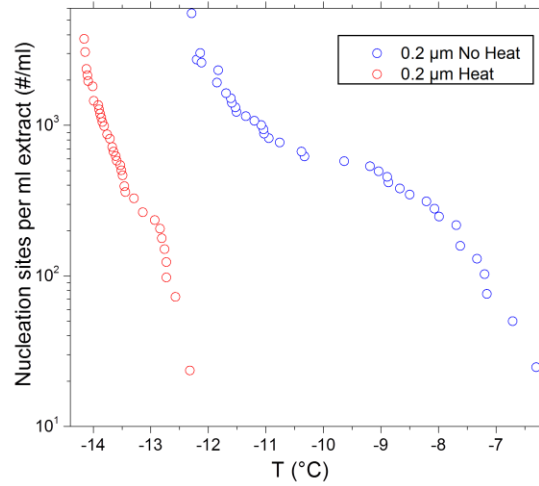


Figure S3: Cumulative nucleus spectra for the 0.2 μm a filtrates of the soil suspension. Indicated are the samples prior to heating (blue circles) and after heating (red circles)

- 1 Atkinson, J. D. *et al.* The importance of feldspar for ice nucleation by mineral dust in mixed-phase clouds. *Nature* **498**, 355-358, (2013).