

Interactive comment on “Comprehensive characterization of an Aspen (*Populus tremuloides*) leaf litter sample that maintained ice nucleation activity for 48 years” by Yalda Vasebi et al.

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REVIEWER COMMENT: Scientifically sound, the manuscript is clearly written and a joy to read. RESPONSE: We greatly appreciate the positive comments provided by reviewer #2. REVIEWER COMMENT: To what fraction of the main suspension do 0.22 μ m filtrate and 0.22 μ m retentate add up to? The difference could inform us about the fraction not washed off the filter. RESPONSE: We agree with reviewer #2. Since we determined the INA of the filtrate and retentate for each filtering step of the leaf litter, we can infer the fraction of INPs that were retained on the filter. See our

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responses to reviewer #1. In the case of the 0.22 μ m filter, the filtrate had almost the same INA as the main suspension. However, for the 100kDa filter, the filtrate and the retentate do not add up to the INA of the applied suspension. Therefore, we concluded in the manuscript that the majority of the INPs were retained on the 100kDa filter. REVIEWER COMMENT: Perhaps combine for a better direct comparison in a single Figure all normalized spectra of main suspension and 0.22 μ m filtrate of leaf litter, *M. alpina* strain LL118, and *Pa. ananatis* BAV 3057. RESPONSE: We think this would be confusing since the concentration of INPs for leaf litter needs to be expressed per gram of litter, for *Pantoea* per colony forming unit, and for *M. alpina* per gram of mycelium. REVIEWER COMMENT: Consider replacing Figure 3 with a Table, where the data are sorted by descending relative contribution. RESPONSE: We like this suggestion. However, we found a compromise. In the revised manuscript, we will sort the taxa by descending relative abundance in the figure legend of Figure 3 for all three panels. REVIEWER COMMENT: Increase the font of label legends and axes in all Figures Page 7, line 24: delete “at” RESPONSE: We will increase the font in all figures in the revised manuscript and delete “at” on page 7, line 24.

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