

Reviewer Comment

August 18, 2026

The authors present a substantially adjusted manuscript, which addresses the reviewer comments well. I still have some technical comments, especially regarding the newest additions of the present manuscript.

The manuscript will be a good contribution to ice nucleation research, but some mostly technical comments should be addressed.

1 Specific comments

1. Line 774: What is the reason for the difference in accuracy? The standard deviation of the first component is 2.853°C , while the same of the second component is 3 celsius? The mean in this case is the temperature at which the fraction frozen curve reaches a value of 0.5? It is also not completely clear to me whether the two curves shown in Figure 9 panel a) are "Curve 1" and "Curve 2" as described in the text. This should be clarified and potentially the legend in panel a) should be adjusted to reflect the names as used in the text.

1.1 Comments on tables and figures

1. In Figure 1, the lines are described in the legend and I understand the markers to represent a freezing event. I think the visual clarity would benefit from a removal of the markers, as the step-lines already provide that information. This would also favor the highly active birch-pollen sample, where the underlying lines are not visible anymore beneath the markers.
2. In Figure 2, one could think about adding a horizontal line at 0.95 to highlight the quick rise as the droplet number increases.
3. Figure 4: The panel labels are covering parts of the y -axis labels, which should be fixed by shifting them slightly to the left. In addition, the panels should be addressed in the figure caption, i.e. in the second sentence: "(panel a) BCS375 feldspar, panel b) Betula pendula pollen washing water, and panel c) background freezing)". Also the x -axis should be shared and size of the labels needs to be increased slightly.
4. Figure 6: I would suggest to adjust the size of the labels, see also my comments regarding Figure 4. Figure 6 is also quite a low resolution, which should be fixed. I think it is also useful to use the same y -axis limits for all three panels, the added benefit of a clear separation of the values for the birch-pollen sample does not add much.

1.2 Technical comments

1. Line 443: In addition $K(T)$ is undefined at $f(T) = 0$, and singular as $f(T)$ approaches 1. -> Not a native speaker, but the commata in the current version seem to be incorrect to me.
2. Line 468: The number of droplet n should be italicized. The same is true for the nominal significance level α . This occurs during the whole section, please check and adjust.
3. Line 474: The space between number and unit should be consistent throughout the manuscript, therefore I would suggest to add a space between 5 and %.
4. Lines 772ff.: The following sentence has some unneeded words: "The ordinary log-rank test remains potentially useful in the few cases in which proportional hazards might be expected, or where fraction frozen curves appear might be expected to differ by a small shift, but should not be treated as the default comparison for all droplet-freezing data". Decide which words you want to keep.

5. Lines 799ff.: Please also take a look at your references. There are some inconsistencies, for example the capitalisation of the publisher "john wiley & sons" (line 806) and "John Wiley & Sons" (line 816).