I thank the authors for taking into account most of my comments. However, my second MAJOR (and the most important) comment was not addressed.

Reviewer comment: The main goal of the SAPPHIRE is that it can be used to investigate the effect of high-voltages (or electric fields) on ice nucleation; however, the authors did not provide a single experiment in this direction. The provided ice nucleation results are in the absence of electric fields. How can we be sure that SAPPHIRE can actually do what this?

Author's response: The reviewer is correct that no results are presented in this manuscript which demonstrate the influence of an electric field on ice nucleation. This is intentional and the reason is because the aim is to focus solely on the experimental methodology and not on systematic or comprehensive results. We have formerly published another article in which the influence of the electric field on ice nucleation is demonstrated and this article has been cited several times in the manuscript. Thus we are very confident that the apparatus fulfils its goals. (Please refer to: Löwe, J.-M., Schremb, M., Hinrichsen, V., and Tropea, C.: Ice Nucleation in the Presence of Electric Fields: An Experimental Study, SAE Technical Paper Series, SAE International 400 Commonwealth Drive, Warrendale, PA, United States, https://doi.org/10.4271/2019-01-2020, 2019.) Adding more results to the present manuscript would unnecessarily increase its length (which is already quite long), especially since a convincing proof of the electric field influence requires a large number of experiments and a very detailed analysis. This detailed analysis considers several influencing factors like the electric field strength, type of electric field or frequency of the electric field and multiple repetitions of each condition to obtain statistical significance. In the opinion of the authors, such a comprehensive description of these experiments would be detrimental to the focus of the present manuscript.

Although it is true that in Löwe et al. (2019) ice nucleation experiments at a cooling rate of 5 K/min for a constant electric field of 0 kV/cm, 2.93 kV/cm, and 4.68 kV/cm are provided, the Löwe et al. (2019) results indicate that constant electric fields has a negligible effect on heterogeneous ice nucleation (Figure 9). Given that the present study introduced the possibility that SAPPHIRE has to use alternating and transient electric fields (in addition to constant electric fields), I am convinced that the authors need to show how alternating and transient electric fields can impact on heterogeneous ice nucleation.

I do not think that claiming that the paper is already long (14 pages) is a good answer for not including these important and sort of mandatory results.

Note that when the original manuscript was rejected, the following comment was provided to the authors:

Reviewer comment: One of the main novel aspects of the submitted manuscript is the possibility to use alternating or transient electric fields, however no experimental results are presented to demonstrate the effect. This should be added in a revised manuscript.

Author's response: On the first point we would prefer to offer the simple rebuttal that further results would significantly overload the manuscript, if they were presented in an adequate manner. Therefore, we prefer not to add these result.

Finally, when the authors resubmitted the manuscript they claimed the following:

In our SAE paper we focused on the influence of a constant electric field on ice nucleation and discussed the main effects and the physical mechanism in detail. Why the author do not want to do the same here for transient and alternating electric fields?

In conclusion, the same IMPORTANT request was made twice but the authors are not willing to add these results claiming that the manuscript is "too" long. One possibility to reduce the length of the manuscript is to remove Figures 2 and 12 as they are copied from Löwe et al. (2019). Those Figures can go to the supplementary material, if needed.