

Author's response to the Editor

In the following, the editor comments are written in bold and our answers in italics. Text passages from the revised manuscript are in quotation marks, modified or newly added passages are marked in green.

Dear Authors,

I just have a minor comment. The background you mention in your response to the reviewer comment ranges from 0.026-0.001/L. However in the revised manuscript you wrote that the background was 0.1/L. This doesn't seem consistent. Even if it cannot be said that with statistical confidence, one should acknowledge that in the manuscript that the background is 0.1/L but can be as low as 0.026-0.001, but with less confidence.

The background value of 0.1/L is a typical value for the standard cleaning procedure, which is why we mention it in the general procedure description (Section 2.1). For the CLACE/INUIT campaign, we paid particular attention to cleaning the wafers, which resulted in these low background values. We now also mention these individual background concentrations in Sect. 2.1.

*„However, even after thorough cleaning a small amount of ice formation can regularly be observed at temperatures at or below -30°C, constituting the background concentration and defining the limit of detection. **This limit is volume-dependent and typically in the order of 0.1 L⁻¹ of atmospheric air for a collection volume of 100 L. However, for the case study, an especially low background value of 0.03 L⁻¹ was achieved (based on a collection volume of 100 L), which decreased further to between 0.026 L⁻¹ and 0.001 L⁻¹ when the actual collection volumes were considered.**”*