Dear Stephan Bansmer and Co-authors,

thanks for your detailed responses and the revised manuscript which is greatly improved.

There are some further points that need revision before this manuscript can be published, see below:

General comments:

Your manuscript contains an overwhelming number of figures. Several of them could be combined into fewer figures (details below), other figures might not be as relevant that they would need to appear in the main manuscript. Please consider to move some of your figures into a supplement.

Formatting of units: (citing from the manuscript preparation guidelines) “Also units in the denominator should be formatted with negative exponents (e.g. km h-1 instead of km/h).”

(Page and line numbers refer to manuscript version 4 in your MS records, i.e. the version prior to the nomenclature version.)

Specific comments:

Abstract:

p1, l5: “...static temperature...” = static air temperature?

p1, l8: “... than usually used...” – what is usually used?

p1, l8/9: “Ice water contents up to 20 g=m3 can be simulated.” “Simulated” sounds like you talk about numerical model simulation, maybe better “generated”?

p1, l9: “... measurement techniques for particle sizing have performed...” Either “have been performed” or “are performed”.

p1, l11: “Finally, some applications of the icing wind tunnel are mentioned.” Maybe replace “mentioned” with “presented” or “introduced”.

Introduction:

p2, l30: You introduce “static air temperature” but then talk about “static temperature”. Please be consistent throughout the manuscript!

p3, l5: “...for which the model...” Which model? It is the first time a model is mentioned, so you should explain more.

p3, l7: “super-cooled” – throughout the manuscript you use “supercooled” as well as “super-cooled”, be consistent!

p3, l30: “European Aviation Safety Agency (EASA)” – already introduced in line 16, so use acronym only.

Section 2:

p4, l27: duplicate “was”

p4, l28/29: Better: “The space available at the installation site suddenly becomes a further design constraint.”

p5, l8: “temperature bound” = “temperature threshold”?

p5, l11: “Figure 46” – figures should be numbered in the order they appear in the text!

p7, l9: “PLC” – this acronym has not been introduced!

p7, l16: figure13 – again, figures should be numbered in the order they appear in the text!

p7, l24: Check format of units.

p7, l32: “introduced” – better “installed”

p8, l1: “where as” – “whereas”

p11, l19: “... sealed with another acrylic compound.” – specify “another” or use “an” instead of “another”

p11, l20: “..., no steps...” – do you mean “gaps”?

p12, l9: Is there a reference for TAUICE?

p12, l13: duplicate “of”

Section 3

p13, Section 2.9: Can you specify accuracies for the static pressure probes and the Vaisala HMT-337?

p14, l32/Figure 16: In the introduction you introduce Median Volume/Mass Diameters as important parameters, why do you use d_{eq} here?

p14, l31 – p15, l14: I wonder whether this paragraph could be shortened. What value does it add to the manuscript?

p16, l5: “IWT” – the acronym has not been introduced yet, please write out.

p16, l32/33: “ice water content IWC” – IWC had been introduced in the introduction, no need to write out here.

Section 4:

p17, l15: “icing-wind-tunnel” – be consistent, either “icing-wind-tunnel” or “icing wind tunnel”

p17, l19: PDI – what does this acronym stand for?

p18, l1: typo: “user?s preference.”

p18, l12-32: Is there no reference for the IKP?

p18, l17: “water vapour” – be consistent american english (or british english) throughout the manuscript.

p18, l31/32: Why do you turn off the shattering artefact removal feature of the software for the wind tunnel measurements? Don't you expect particle shattering to happen here, too? Especially in high IWC or LWC conditions! Furthermore, it becomes hard then to compare in situ field measurements and wind tunnel measurement when this treatment differs!

p19, l15/16, l24: "2DS" vs. "2D-S" – be consistent.

p23, l7: "...higher concentrations of small particles..." – could this not be due to particle shattering introducing numerous small particles (as the removal treatment was turned off)?

Section 5

p23, l27: "European Aviation Safety Agency" = EASA (acronym already introduced)

p24, l17: "generic test articles" – do you mean "test objects" or "test models"?

p25, l10/l22: "3-D" vs. "3D" – be consistent!

Acknowledgements:

p26, l12: typo "contact" – contract

Figures:

As mentioned before, the figures should be numbered in the order they are mentioned in the text.

Furthermore, I find that you have a huge number of figures. I suggest you have a good revision of which figures are important and less important figures could be moved to a supplement. Also, maybe some figures could be grouped together, or even eliminated. See following suggestions:

- The manuscript contains a number of technical figures, these could potentially be grouped together (and then labeled as subfigures) , e.g. Figures 6 and 7; Figures concerning the ice particle generation and dosing, including the ice particle conveyance pipe; maybe you have further ideas where figures would fit together thematically. I also feel that some of these figures might be well suited for a supplement.
- Figures that could be joined together and labeled as subfigure (a) and (b): 14 + 15, 21 + 19, 25 + 26, 27 + 28, 34 + 35, 36 + 37, 38 + 39, 41 + 42
- Figure 45 is not needed and can be removed – what value does it add to the manuscript?
- Figure 23 + 24: You show images for the IKP and HSI probes, but not for PDI and 2DS probes. Are these figures needed, what value do they add to the manuscript?

Figure 41: Where exactly is the cylinder? (It is not as obvious as in Figure 42.) Why are the side views of figures 41 and 42 so different, is Figure 41 a model simulation? Also, I think these two figures could be joined into one.

Units in figures: "Also units in the denominator should be formatted with negative exponents (e.g. km h^{-1} instead of km/h)."