Authors' response to reviewer #2

First of all, we would like to thank the reviewer for the useful comments and suggestions which helped to improve the manuscript. We also thank for the appreciation of our paper. The reviewer's comments and questions were answered in the following:

Remark:
The reviewer's comments or questions are written in bold font, our answers in standard font, and the changes within the manuscript in italic font.

1. The LWC given in line 8 of the abstract must be 0.9 g/m^3, not g/cm^3.

The unit of the LWC given in g/cm^3 was an oversight and has been changed to g/m^3.

2. Page 3, line 5: Do these cited studies use retention coefficients or do they state that these are needed and should be used?

The cited studies on page 3, line 5 use retention coefficients in the model simulations. Almost all authors emphasized that there is a high uncertainty in the modeling arising from the lack of experimental data concerning the retention coefficients, particularly for the organic species. Accordingly, the text in the manuscript has been modified as follows from page 3 line 5:

There are some model studies available in literature which investigate the impact of deep convection on the scavenging and redistribution of trace substances in the troposphere (Mari et al., 2000; Barth et al., 2001, 2007b, a; Salzmann et al., 2007; Long et al., 2010; Leriche et al., 2013; Bela et al., 2016) but almost all emphasized the high uncertainty in their modeling studies arising from the lack of experimentally determined retention coefficients. This is especially true for water-soluble organic substances.

3. Figure 1, caption: What is the meaning of the second sentence? The average error of what? Of the number concentrations given? Please clarify.

The second sentence in the caption of Figure 1 has been complemented for the missing information. The error of 23% is valid for both distributions because the mass distribution (lower panel) is normalized. The figure caption reads now as:

Droplet number (upper panel) and mass (lower panel) distribution of the supercooled cloud generated in the wind tunnel. The average error due to count statistics for both given distributions is 23%.

4. Page 9, line 20: Please re-phrase this sentence. Accordingly, please re-check the English throughout.

The sentence on Page 9, Line 20 has been re-phrased as:

In contrast to formic acid the retention coefficient of acetic acid shows a more pronounced temperature dependency. Additionally, a significant dependency of the retention coefficient on the shape of the collectors and the ventilation conditions is evident.

5. Page 20, Table 4: The exponents of the Henry coefficients are sometimes without superscript when the exponent is two digits.

All Henry's law coefficients have been corrected to their popper value now.