

Interactive comment on “Occurrence and source apportionment of perfluoroalkyl acids (PFAAs) in the atmosphere in China” by Deming Han et al.

Anonymous Referee #1

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Major comment: It is very unlikely that PFSAAs occur in the gas phase. Recent studies have shown that PFSAAs have been measured in passive samplers since passive samplers are also collecting particles. It is really important to clarify in this manuscript that PFSAAs are typically particle-bound and the measured concentrations of PFSAAs are most likely due to the collection of particles using the passive samplers. Make also clear that the measured concentration is NOT the gas phase but rather “air concentrations” with mainly gas phase and partly particulate phase. This has to be clarified at all places in the manuscript, figures and SI before a publication can be considered.

General comments: - Use two significant numbers - Table 1: o It should be “HV-AAS” for Toronto, Canada - Figure 3 o Change to “Northwest” - Figure 4 o Describe the four factors in the figure caption

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Specific comments: Line 13: Add total number of samples, number of sampling locations and which sampling method was used Line 13: indicate if PFAAs were measured in the gas or particulate phase Line 18: Specify which location are these “areas” Line 24: Change to “ionizable” Lines 187-189: Clarify that this is the average of x numbers of sampling locations in China Lines 216-218: Indicate, how many sites were included from each area “(n = . . .)”

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2019-676>, 2019.

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