

We thank Reviewer #2 for her/his timely and constructive feedback.

***Often, it would be great when the PTR-MS information could be accompanied by filter sampling and offline analysis to add detail to the findings which the PTR-MS data cannot resolve alone. Maybe that could be worth a mention.***

Unfortunately, no filter samples were collected during the SARP-2018 flights with the DC-8. A comparison of CHARON PTR-ToF-MS data with filter samples will be subject of future work.

***page 6, line 27: Maybe such possible improvements could be summarized towards the end of the paper ?***

We have followed this suggestion and added the following paragraph to the Conclusions: *“Further improvements are, however, warranted to eliminate or reduce the observed signal tailing (1/e-decay within 6 to 20 s). Recent test measurements by the instrument manufacturer with a yet undisclosed treatment of all wetted stainless steel surfaces indicate that the response time can be reduced by at least a factor of 2 compared to the data shown in this work (Piel et al, in preparation).”*

***page 8, line 29: Is that information that the three mentioned m/z are produced from N,N-diethylethanolamine included in the references above or where is this information traceable?***

We measured N,N-diethylethanolamine in our laboratory, but the data are unpublished. This is explicitly mentioned in the revised manuscript (*“unpublished data from our laboratory”*).