

Atmos. Meas. Tech. Discuss., referee comment RC3
<https://doi.org/10.5194/amt-2021-271-RC3>, 2021
© Author(s) 2021. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on amt-2021-271

Nicholas Marsden (Referee)

Referee comment on "Design, characterization, and first field deployment of a novel aircraft-based aerosol mass spectrometer combining the laser ablation and flash vaporization techniques" by Andreas Hünig et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2021-271-RC3>, 2021

The authors present the design and development of a mass spectrometry system for comprehensive measurement of aerosol composition, in which two commonly used techniques, single particle mass spectrometry (SPMS) and aerosol mass spectrometry (AMS) are combined in a single tandem instrument. The manuscript represents a substantial body of work that required considerable expertise in instrument design including differential pumped vacuum systems, optical particle detection and time-of-flight mass spectrometry (TOFMS). A substantial amount of data is presented to evaluate the instrument design. The subject matter is very suitable for this journal but some important issues need to be addressed in the content if this manuscript is to be used as an instrument characterisation reference for future publications.

Please see attached supplement for detailed comments.

Please also note the supplement to this comment:

<https://amt.copernicus.org/preprints/amt-2021-271/amt-2021-271-RC3-supplement.pdf>