

Interactive comment on “Chemical ionisation quadrupole mass spectrometer with an electrical discharge ion source for atmospheric trace gas measurement” by Philipp G. Eger et al.

Anonymous Referee #1

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This is a well written article. Most of my comments were already addressed during the pre-review stage. I still think that the manuscript would benefit from a more detailed comparison of this new electrical discharge method with the existing corona ion sources, but it's not absolutely necessary. In my opinion, the paper is publishable once all comments by the 2 reviewers have been addressed.

Minor comments pg 7 - "Mathieu differential equations" please provide a reference
Figure 8 - have you plotted the CIMS against the SMEAR SO₂ data? Consider adding the fit parameters (slope, intercept, r) to the text.

A comment on the other reviewer's comment regarding the MPI group being the only

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one to report PAA data: The detection of PAA by iodide CIMS is chemically similar to detection of peroxyacetic acid (PAA) that was reported by Veres et al. ACP 2015, 15(4), 8101. In fact, my group's iodide CIMS is very sensitive to PAA - we just haven't reported any data as we haven't developed a calibration source to determine response factors and customized the inlet setup as the Crowley group has done.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2018-428, 2018.

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