Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2016-349-RC3, 2017

Atmospheric Measurement Techniques Discussions
Open Access
EGU

Interactive comment on "Comparison of VOC measurements made by PTR-MS, Adsorbent Tube/GC-FID-MS and DNPH-derivatization/HPLC during the Sydney Particle Study, 2012: a contribution to the assessment of uncertainty in current atmospheric VOC measurements" *by* Erin Dunne et al.

Anonymous Referee #1

Received and published: 7 March 2017

General Comments

In this paper the authors present results of an intercomparison of three methods for analyzing volatile organic compounds, including PTR-MS, adsorption tube-GCFID, and DNPH-HPLC. Data were obtained from a 2012 field study in Sydney, Australia. The degree of agreement between methods was evaluated based on comparison of slopes

Printer-friendly version

Discussion paper

and intercepts of plots of one method against another. In some cases agreement was within 95% confidence limits, and in others not. Discrepancies were typically explained as being due to contributions of non-target compounds to the ions used to quantify compounds by PTR-MS (high bias) or loss of compounds during DNPH cartridge sampling (low bias). Overall, the measurements were carefully done, systematic, and the comparison was statistically sound and thorough. The explanations for discrepancies were reasonable and in many cases supported by observations reported by others for these methods. The manuscript is concise and well written, and I think makes a useful contribution to the literature on atmospheric measurement methodology. It is essentially publishable in AMT in its current form, though I note a few typos below.

Specific Comments

None.

Technical Comments

1. Page 9, line 29: Delete “Ne” at end of sentence.

2. Page 9, line 38: “din” should be “in”.

3. Page 11, line 27: I think “AT-VOC” should be “ DNPH-HPLC”.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-349, 2017.

Printer-friendly version

Discussion paper