Atmos. Meas. Tech. Discuss., 4, C2850–C2851, 2012
www.atmos-meas-tech-discuss.net/4/C2850/2012/

Atmospheric Measurement Techniques Discussions

Interactive comment on "OH clock determination by proton transfer reaction mass spectrometry at an environmental chamber" *by* P. Barmet et al.

P. Barmet et al.

peter.barmet@psi.ch

Received and published: 23 February 2012

We would like to thank both referees for taking the time to read and comment on this manuscript and for their helpful and constructive comments. Reviewer comments are portrayed in regular font style, replies in *italic*.

Response to referee #1

The authors may wish to note the fact that the choice of tracer is dependent on the chemical analysis techniques used. For example, FTIR is a widely used analytical technique in chamber studies. It is difficult to resolve IR features attributable to relatively large molecules such as n-butanol-d9 in complex mixtures. Compounds other

than n-butanol-d9 would be preferable tracers when analytical techniques other than PTR-MS are used.
*On **page 7476, line 11** the sentence "The ideal OH tracer [...]" will be replaced by "In our case, the ideal OH tracer [...]".*
*Then we will add in the conclusion (**page 7486, line 16**) the following sentence: "We would like to point out here that other compounds than n-butanol-d9 would be preferable tracers when analytical techniques other than PTR-MS are used."*

Response to referee #2
Page 7475, line 9:
"Direct OH concentration measurement in chambers are difficult to maintain over long time periods, as very high flow rates are required." The authors should clarify that high flow rates are only required by certain more portable OH measurement techniques (such as LIF-FAGE) not by DOAS.
Sentence will be changed and complemented to:
"Direct OH concentration measurement in chambers are difficult to maintain over long time periods, as for most OH measurement techniques (except DOAS) very high flow rates are required."
Page 7479, line 1:
PTR-MS shows on most even m/z low signal intensities. This seems like a sentence fragment.
Actually this should be a whole sentence. However we will change it to: "The mass spectra in PTR-MS show on even mass-to-charge ratios (m/z) generally low signal intensities due to the protonation of the compounds ($M+H^+$)."

Interactive comment on Atmos. Meas. Tech. Discuss., 4, 7471, 2011.

AMTD
4, C2850–C2851, 2012

Interactive Comment