

Interactive comment on “A broadband cavity enhanced absorption spectrometer for aircraft measurements of glyoxal, methylglyoxal, nitrous acid, nitrogen dioxide, and water vapor” by K.-E. Min et al.

Anonymous Referee #2

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This paper reports development of an airborne LED-CEAS system which shows extraordinary stability in terms of pressure change on the aircraft (the authors were able to back out mirror R based on pressure-induced number density change of air!). The paper is well written and is suitable for publication on AMT with only a few minor points as below.

Page 11213, line 11, “underscore” -> “underscores”;

Section 2.2, I am (and I believe the general community of field CEAS are) interested in

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this novel cage design based on carbon fibre rods which was first introduced in Wild's paper and then adopted here. A couple of questions about fine details: (1) how did you adjust for alignment between the two mirrors prior to locking them? (2) if you use O-rings to make seal, will they not be the most sensitive components in the whole design that are vulnerable to pressure change? How did you cope with this?

Page 11219, I am not sure whether a relatively constant CHOCHO/HCHO ratio during field measurements SENEX 2013 is a convincing evidence supporting the negligible effect of RH on inlet transmission efficiency of CHOCHO, given the large uncertainties wrt source/sink terms of these two species and their relations with RH.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 11209, 2015.

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