

Interactive comment on “Atmospheric CO₂ monitoring with single-cell NDIR-based analyzers” by B. B. Stephens et al.

Anonymous Referee #2

Received and published: 17 September 2011

General Comments: This paper provides a low cost means of monitoring CO₂ mixing ratio and fluxes that is well described and useful. While recent technological developments provide alternatives to infra-red absorption methods, the instrumentation described here is well worth publishing. The present requirements. The authors have made a sound assessment of the key components affecting measurement precision and have addressed these in the construction of their instruments, and calibration of the field standards. The measurement error analysis is robust and the majority of significant affects are accounted for.

Specific Comments: 1)It would be helpful if the authors stated whether the AIRCOA system uses the same or different in-line regulators as the PSU systems. (Pg 4332)

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2)The authors should consider stating that the WMO CO₂ scale is a mole fraction scale.

Technical corrections: 1)Line 23, pg 4331. “data following the valve is ignored” should read . “data following the valve switch is ignored” 2)Line 8, pg 4340. “ An LI-7000” should read “A LI-7000” 3)Pg4353. Fig 2 requires improvement as the text in panel (b) is too small, the legend text is too small, and the axis text is not consistent with that in panel (a).

Interactive comment on Atmos. Meas. Tech. Discuss., 4, 4325, 2011.

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