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Atmospheric Measurement Techniques Discussions

Interactive comment on "Evaluating calibration strategies for isotope ratio infrared spectroscopy for atmospheric $^{13}CO_2/^{12}CO_2$ measurement" *by* X.-F. Wen et al.

X.-F. Wen et al.

wenxf@igsnrr.ac.cn

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Response to the reviewer (S. Guillon)

General Comments 1) The authors didn't mention any temperature dependence of the IRIS measurement. We measured such a dependence with the Los Gatos Research analyzer DLT-100, which is one of the instruments used in this article. We found that a 4deg temperature variation in the room where the analyzer is run induces a 0.2deg variation in the analyzer cell temperature, and 30 ppm and -2.6 ‰ errors on CO2 mixing ratio and delta value, respectively (Guillon et al., 2012, App. Phys B, Fig. 6). As IRIS analyzers can't always be used in a laboratory having air conditioning and stable

temperature, we think the error induced by this temperature dependence should be considered.

Thank you for this suggestion. Clarified. “Sensibility to changing environmental conditions (e.g. temperature dependence; Guillon et al., 2012) and dependence of δ13C on CO2 concentration are the two main sources of error affecting the IRIS measurements.”

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 795, 2013.