

Interactive comment on “Calibration of isotopologue-specific optical trace gas analysers: A practical guide” by David W. T. Griffith

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It is nice to see this practical guide to calibration of optical isotopologue spectrometers, which gives much needed careful consideration to the topic. I am sure it will be helpful to the research community. In order to fully contextualize this work, I would just recommend that the author consider and cite Wehr et al., “Long-term eddy covariance measurements of the isotopic composition...”, *Agricultural and Forest Meteorology* 181 (2013) 69–84. Section 3.5 and Appendix A of Wehr et al. describe and advocate the same isotopologue-specific calibration approach as the present manuscript, including full accounting of all non-negligible isotopologues. In particular, the present manuscript’s Section 2 is effectively identical to Wehr et al.’s Appendix A.

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Wehr et al. also raises the issue of cross-talk between the isotopologue spectral lines (i.e. when the concentration that the instrument reports for one isotopologue depends on the concentration of another isotopologue), which can occur due to partial overlap of the lines and inadequate spectral fitting. Cross-talk was not a problem for our particular instrument but could induce substantial error in general when using the isotopologue calibration approach. It might be a good idea to raise this point in the present guide, as it is something users of these instruments ought to check for.

Regards,

Rick Wehr

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