

Interactive comment on “First measurements of continuous $\delta^{18}\text{O}$ -CO₂ with a Fourier Transform InfraRed spectrometer in Heidelberg, Germany” by S. N. Vardag et al.

Anonymous Referee #2

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This paper describes the extension of a previously published FTIR instrument and data analysis method (e.g. Hammer et al., AMT, 2013) to the measurement of d18O-CO₂. High precision measurements of stable isotopes are arguably very useful to constrain the CO₂ sources and sinks, and FTIR with its multicomponent capability a very attractive approach. The progress that has been achieved with respect to the precision and stability using FTIR for atmospheric measurements are impressive, and the evaluation of the method for d18O-CO₂ is, therefore, highly welcome. However, to date, d18O-CO₂ is certainly the most challenging parameter to be measured in this FTIR setup, and it is not surprising that the original assessment by Esler et al. (2000)

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was very critical. While the paper by Vardag et al. is generally well written and shows promising results for d18O-CO₂, it lacks rigor, detail and a more critical spirit to be published in its present form. I, therefore, suggest major changes and a final decision based on the reviewed paper.

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/7/C1865/2014/amtd-7-C1865-2014-supplement.pdf>

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