

Interactive comment on “H₂S interference on CO₂ isotopic measurements using a Picarro G1101-i cavity ring-down spectrometer” by K. Malowany et al.

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We would like to thank the reviewer for their discussion point on the H₂S interference as it exists in newer models of the carbon isotope analyzer. In short, all carbon isotopic analyzers from Picarro will have a similar interference with H₂S, and no corrections have been applied in any of the newer models. The operating lines of the instrument were chosen to minimize strong overlap of spectral lines from ambient levels of small molecules found in ambient air such as ammonia, water vapor, H₂S etc. and as such, the H₂S interference only occurs at concentrations > 1ppb. Normal atmospheric concentrations are much below this amount and no correction for the H₂S overlap has

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previously been warranted. In non-atmospheric conditions, such as those on active volcanoes or sour gas plants, these concentrations are more common and H₂S should be considered as an interferant, Models post-dating the G1101-i have maintained the same spectral lines for CO₂, and their H₂S performance is presumed to be equivalent. We have added this discussion point to the paper so that future users of the carbon isotope analyzer are aware that the H₂S interference affects all models as of the time of publication.

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