

Interactive comment on “High precision laser spectrometer for multiple greenhouse gas analysis in 1 mL air from ice core samples” by Bernhard Bereiter et al.

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This is a great study and a great instrument. I found the paper very interesting to read throughout but had one question constantly in the back of my mind: how will the instrument deal with the presence of ice core drilling fluid in the gas sample? Of course, we do everything we can to avoid this and there are ways to mitigate the problem (that are beyond the scope of this study). I was thinking more along the lines of whether this was considered during the design phase. Or if the author's have been able to do theoretical or experimental work on potential spectral interferences. That's all.

If drilling fluid can be shown not to be a problem, than the method will have (another)

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major advantage on dual-inlet IRMS measurements of carbon isotopes as drilling fluid can be the Achilles' Heel of this technique. However, if drilling fluid is problematic, it's not clear to me if traditional GC-MS techniques remain better suited for small samples.

All the best, Thomas Bauska

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