

## ***Interactive comment on “Comparison of flux gradient and chamber techniques to measure soil N<sub>2</sub>O emissions” by Mei Bai et al.***

**Mei Bai et al.**

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We thank the positive feedback on the manuscript. we have revised the manuscript (see the attachment).

We agree, and the chamber vs. FG comparison was only evaluated during periods of concurrent measurements. In the revised manuscript, we have summarised our footprint analysis on FG fluxes and the investigation of the bias of chamber measurements using linear dC/dt.

The cumulative flux is often estimated by summing the mean daily flux over a period of time. Ideally, a continuous real time series (or regular measurements during the day) should be used as emissions can vary throughout the day. As we used chambers

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measurements only from 11 am to noon each day, calculating cumulative fluxes using the chamber data would result in a biased estimation. Furthermore, a cumulative flux ratio between the two measurement methods would only provide one data point, which would preclude inference.

Please also note the supplement to this comment:

<https://www.atmos-meas-tech-discuss.net/amt-2018-90/amt-2018-90-AC1-supplement.pdf>

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2018-90, 2018.

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