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Atmospheric Measurement Techniques Discussions

Interactive comment on "Comparison of flux gradient and chamber techniques to measure soil N_2O emissions" *by* Mei Bai et al.

Anonymous Referee #2

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General comments This manuscript measured N2O emissions from celery field using static chamber technique and micrometeorological flux gradient method and compared the difference by selecting concurrent measurement periods, and the expected lower emission estimates obtained with static chamber technique were attributed to the theoretical underestimation of this technique as well as the different footprint sizes. This manuscript is well organized and written and results are well presented and discussed. It should be suitable for publication with very minor revision.

Minor revision This manuscript identified the lower emissions estimates of N2O from celery field when static chamber technique was used, but the underestimation of N2O emissions were only evaluated with the concurrent measurement period. In addition, the reviewer thinks that presenting a ratio (QFG/Qchamber) of the cumulative N2O

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emissions (may be from 28 March to 8 April according to Figure 2(b)) of these two technique would be more helpful to evaluate these two techniques at a big view, e.g. seasonal or annual emission.

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

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