Atmospheric Measurement Techniques Discussions

Atmos. Meas. Tech. Discuss., author comment AC2
https://doi.org/10.5194/amt-2022-118-AC2, 2022

Reply on RC2

Yunsong Liu et al.

Author comment on "Improvements of a low-cost CO_2 commercial nondispersive near-infrared (NDIR) sensor for unmanned aerial vehicle (UAV) atmospheric mapping applications" by Yunsong Liu et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2022-118-AC2, 2022

We kindly thank Anonymous Referee #2 for your helpful review.

This study presents the development and validation of a novel portable CO_2 measuring system suitable for operations onboard small-sized UAVs. This system has a fast response time (1 Hz) and a relatively high precision (±2 ppm 1σ at 1 Hz) to make it have the capacity to monitor emission plumes, and characterize their spatial and temporal distribution. Our revision following the two reviewers' comments tends to reinforce our statements about the importance of careful tests and calibrations to obtain measurements of sufficient precision.

Please find the detailed reply to each comment in the attached file.

Please also note the supplement to this comment:
https://amt.copernicus.org/preprints/amt-2022-118/amt-2022-118-AC2-supplement.pdf