Supplement of

Improvements of a low-cost CO₂ commercial NDIR sensor for UAV atmospheric mapping applications

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Figures and pictures

Figure S1 the setup of the system onboard a small aircraft (a) and the manned aircraft platform Beechcraft Baron 58 (b).

Figure S2 Calibration linear fits calculated for SaA (a) and SaB (b).
Figure S3 Allan deviation test results for SaA (a) and SaB (b).

![Allan deviation test results for SaA and SaB](image)

Figure S4 Temperature sensitivity test diagrams, (a) shows the time series of chamber temperature, the sensor cell temperature of SaA and CO$_2$ readings from SaA; (b) shows the time series of chamber temperature, the sensor cell temperature of SaB and CO$_2$ readings from SaB.

![Temperature sensitivity test diagrams](image)

Figure S5 (a) the evolution of target cylinder measurements for SaB and the red line is the linear regression of CO$_2$ (ppm) against time; (b) presents the calibrations before and after the flights.

![Evolution of target cylinder measurements and calibrations](image)