Supplementary information of

A 30-month Field Evaluation of Low-Cost CO_2 Sensors Using a Reference Instrument

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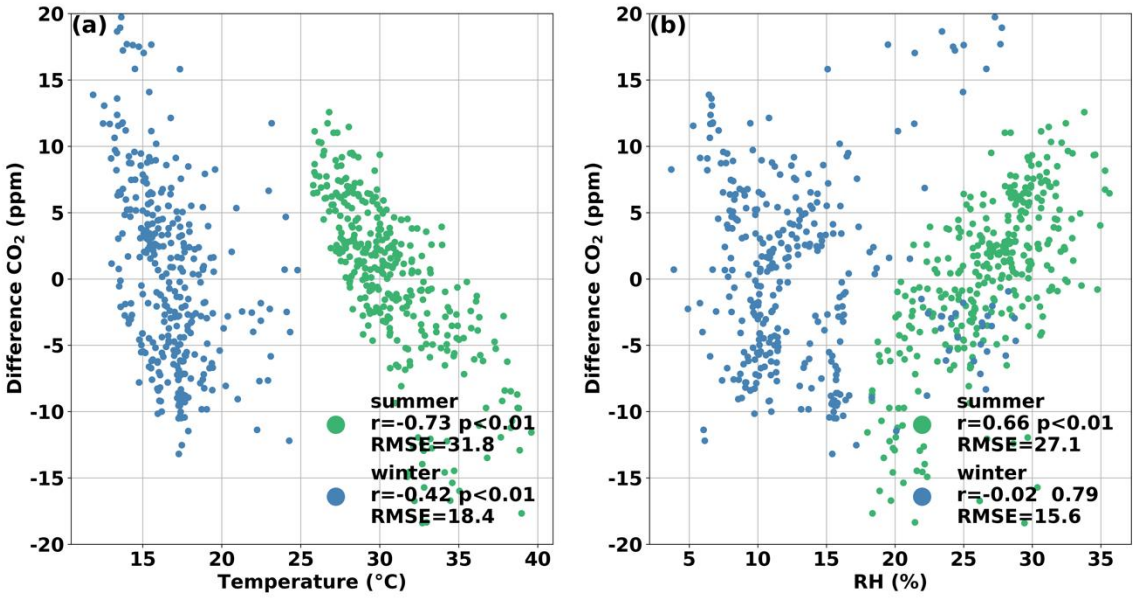

Figure S1. Temperature (a) and relative humidity (b) dependence of ΔCO_2. For SENSE-IAP at Beijing site from July 13th to 27th in 2022 (summer in green) and January 10th to 24th in 2023 (winter in blue).

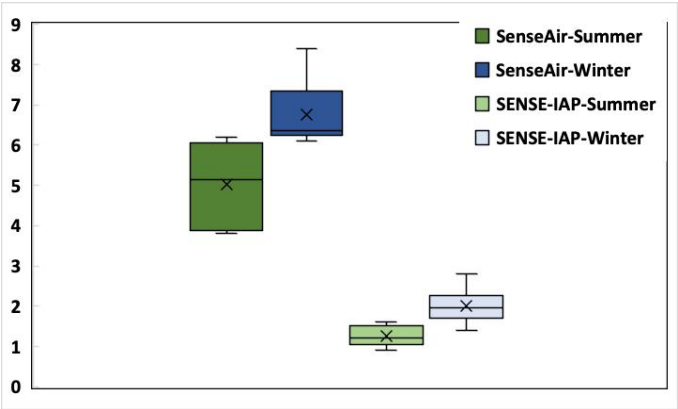

Figure S2. Comparation of both raw CO2 data form SenseAir (dark) and environment corrected SENSE-IAP (light) with Picarro in summer (July 13th to 27th in 2022, green) and winter (January 10th to 24th in 2023, blue). Box plot include the RMSE for all six sensors at Beijing site.

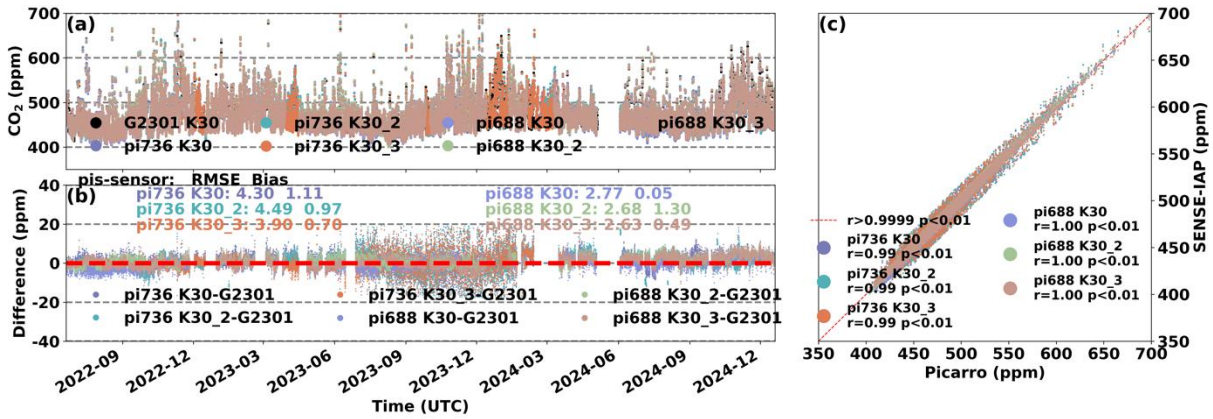

Figure S3: (a) Comparison of hourly CO_2 concentrations measured by all six sensors of SENSE-IAP (after drift correlation) in two instruments and Picarro system at Beijing-IAP from June 2022 to Dec 2024, (b) the time series of ΔCO_2, (c) scatter plot of SENSE-IAP and Picarro.

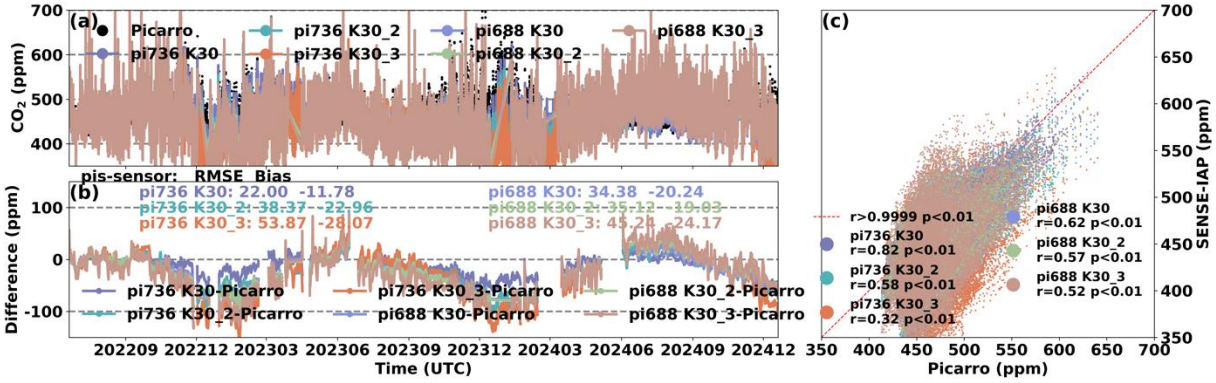

Figure S4: (a) Comparison of hourly CO_2 concentrations measured by all six sensors of raw signal in two instruments and Picarro system at Beijing-IAP from June 2022 to Dec 2024, (b) the time series of ΔCO_2 through a 24-hour running mean, (c) scatter plot of raw signal and Picarro.

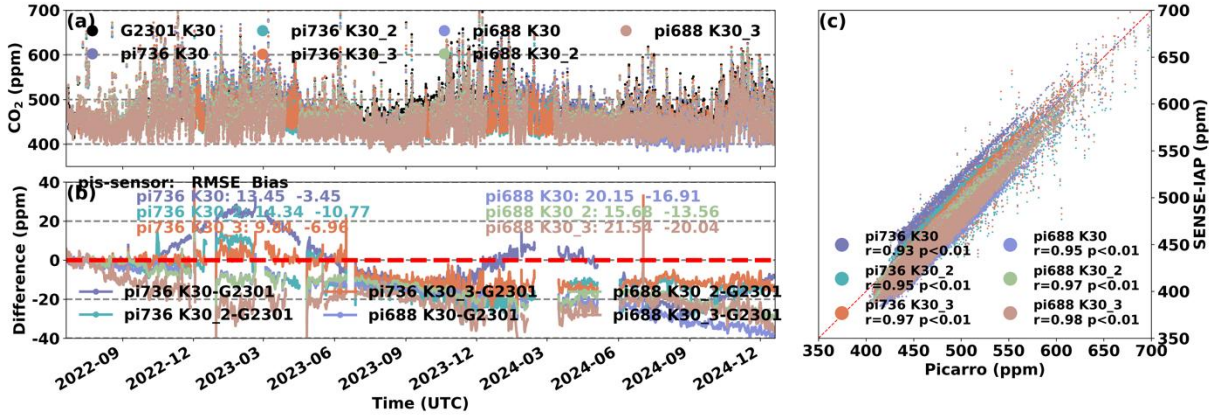

Figure S5: (a) Comparison of hourly CO_2 concentrations measured by all six sensors of SENSE_IAP in two instruments and Picarro system at Beijing-IAP from June 2022 to Dec 2024, (b) the time series of ΔCO_2 through a 24-hour running mean, (c) scatter plot of SENSE_IAP and Picarro.

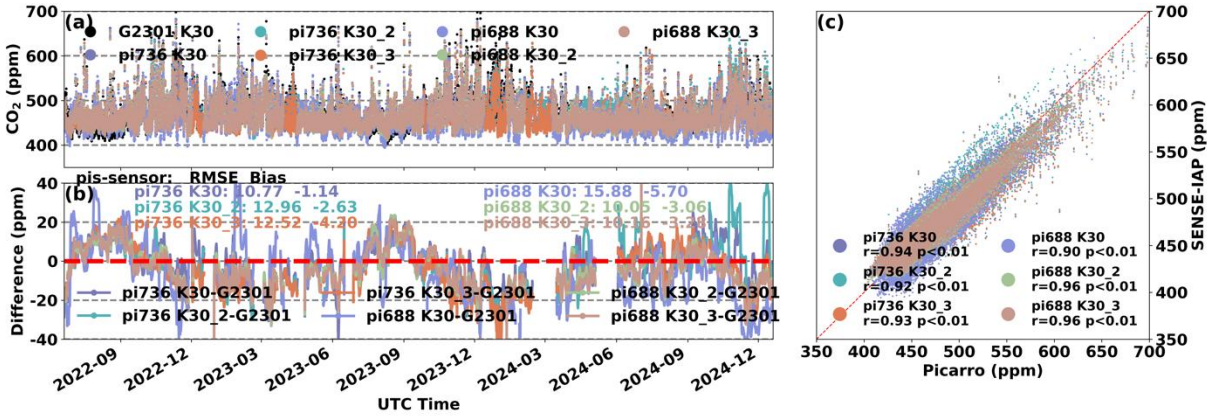

Figure S6: (a) Comparison of hourly CO_2 concentrations measured by all six sensors of SenseAir in two instruments and Picarro system at Beijing-IAP from June 2022 to Dec 2024, (b) the time series of ΔCO_2 through a 24-hour running mean, (c) scatter plot of SenseAir and Picarro.

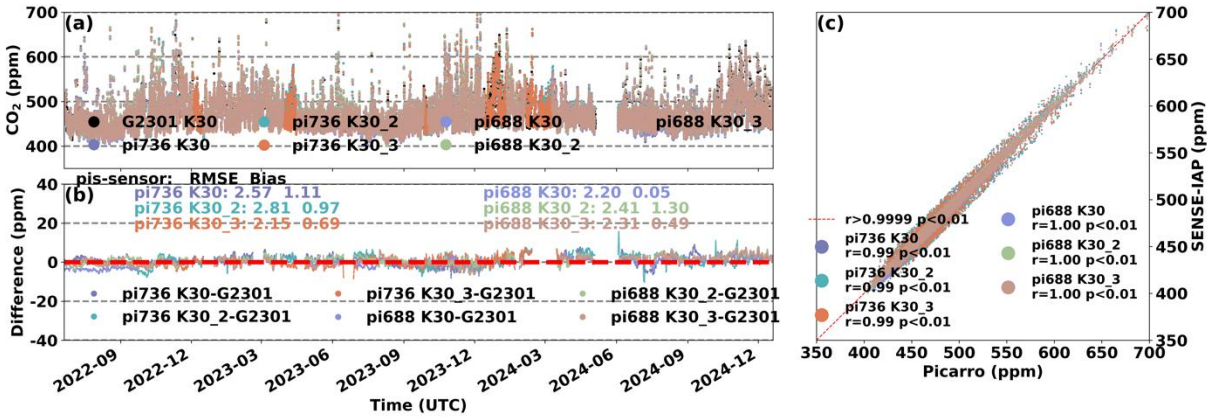

Figure S7: (a) Comparison of hourly CO_2 concentrations measured by all six sensors of SENSE-IAP (after drift correlation) in two instruments and Picarro system at Beijing-IAP from June 2022 to Dec 2024, (b) the time series of ΔCO_2 through a 24-hour running mean, (c) scatter plot of SENSE-IAP and Picarro.