**Response to reviewer comments**

We are glad that the reviewers found our revisions and response to the comments adequate. Below we address the remaining concern that the reviewer raised in Referee report #2:

Admittedly, I would like to still see more technical details about the CO2 analyzer itself in Section 2.1. For example, what sort of light source is being used and what spectral line(s) are being targeted? What is the volume of the gas cell in the analyzer? This information is useful alongside discussions of the analyzer's performance and should be included in the manuscript.

Gas cell volume of the prototype analyzer was 30.3 $cm^3$. The analyzer made use of Microglow light source, which is a proprietary micro-hotplate infrared emitter developed by Vaisala for use in NDIR (non-dispersive infrared) gas sensors. The prototype was based on Vaisala CARBOCAP technology (see, e.g., Vaisala Oyj, 2026), further developed for high-response performance purposes. The Vaisala CARBOCAP probes use a single-beam, dual-wavelength NDIR method. Instead of fixed multi-line atomic/molecular emission lines, the sensor relies on an electrically tunable Fabry–Pérot Interferometer (FPI) filter that alternates between a target infrared absorption wavelength and a near-by reference wavelength with no absorption. The probe customized for the prototype sensor used multi-wavelength method with absorption bands at around 4.3 and 2.6 μm for carbon dioxide and water vapor, respectively.

Vaisala Oyj: Vaisala CARBOCAP Technology, [online] Available from: https://www.vaisala.com/en/vaisala-carbocapr-technology (Accessed 11 August 2026), 2026.

The Sect 2.1 was amended respectively.