

Public justification (visible to the public if the article is accepted and published):

Thank you for the upload of the revised manuscript that addresses the reviewers' comments. Based on the revised manuscript, I have two comments that should be addressed.

Specific comment: Figure 8 shows CO<sub>2</sub> concentrations but not fluxes from the IRGA. Based on the mean concentrations it appears that these differences might be mainly due to calibration offsets. It appears unlikely that two stations have 100% difference in CO<sub>2</sub> concentrations (this should be checked by converting to a more standard/ comparable unit like ppm, given that temperature and pressure also factor into these differences. This would also affect any annual changes, whereas PPM would be indifferent to annual temperature change). I understand that calibration in these locations can be difficult, but these CO<sub>2</sub> differences should be discussed in the manuscript (especially with respect on what this might mean for fluxes in the dataset).

Reply: Thank you for the valuable suggestion. As the BJ station initiated the earliest eddy covariance observations in the network, its prolonged operation led to a calibration delay that introduced measurable errors in the CO<sub>2</sub> concentration data. This issue was addressed through a recalibration performed in May 2022. To uphold the data integrity of the Nagqu observation network, we have made the CO<sub>2</sub> data from the BJ station for the period 2022–2025 publicly available. New Fig.8 presenting the data after quality control restoration is provided in Row 345, with the units consistently converted to ppm as requested.

Technical Comment: Replace CO<sub>2</sub>/H<sub>2</sub>O analysis meter with “CO<sub>2</sub>/ H<sub>2</sub>O Gas Analyzer” in Table 1

Reply: In response to your comment, the term “CO<sub>2</sub>/H<sub>2</sub>O analysis meter” in Table 1 has been revised to “CO<sub>2</sub>/H<sub>2</sub>O Gas Analyzer”.