

Wu et al., 2022: Towards sector-based attribution using intra-city variations in satellite-based emission ratios between CO₂ and CO. ACP

Review of revised submission

The authors have provided thorough, point-by-point responses to the questions and comments raised by this reviewer. In the revised submission, improvements have been carefully implemented through updated text, several updated figures and even additional data collection and analysis.

In particular additional data collection and analysis has been performed to address the major comment regarding the potential effect of specific daily temporal patterns followed by some sectors, such as road transport and the residential sector, leading to changing ER_CO during the day, which could present an additional source of mismatch between observed XCO and XCO₂ even when wind conditions remain relatively constant. By using TCCON data of simultaneously retrieved CO and CO₂ signals, collected near LA, the authors show that, although the ER_CO may change substantially during the day, for the overpasses that went into the final result for LA, the differences were small. As the potential mismatch is now clearly discussed in the text, this comment can be considered resolved.

The authors also addressed the remaining minor and technical comments and generally improved the clarity and readability of the manuscript, resulting in a high-quality paper.