

Review – Why do inverse models disagree? A case study with two European CO₂ inversion by Munassar et al.

The authors addressed the comments well, and I can see many improvements throughout the manuscript. I have minor suggestions that encourage the authors to consider and discuss in the manuscript before publication.

1. Line 428 – 452: It is not clear what the author is intended to address by showing the comparison between model output with two different studies. This study aims to find the dominant drivers of amid spread of CO₂ estimates, but there are a large number of differences in between this study and two different studies by Monteil et al. (2020) and Tompson et al. (2020). Therefore, comparing ranges of CO₂ inversion from this study and others is not enough to claim as “(Line 448) This implies that the use of difference atmospheric transport models could account for a large fraction of differences in posterior fluxes” so it needs to provide more results.
2. I still encourage the authors to discuss the potential uncertainties/bias by using a limited number of ensemble members in CO₂ inversion in the discussion.