

Atmos. Chem. Phys. Discuss., author comment AC1 https://doi.org/10.5194/acp-2022-506-AC1, 2022 © Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.

Reply on RC2

Andrew F. Feldman et al.

Author comment on "Using Orbiting Carbon Observatory-2 (OCO-2) column CO₂ retrievals to rapidly detect and estimate biospheric surface carbon flux anomalies" by Andrew F. Feldman et al., Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2022-506-AC1, 2022

We thank Dr. Patra for the constructive viewpoint. The paper is ultimately a methodological proof-of-concept, but this comment showed us that it may be too technical and the reader could lose the main point that we can use satellite XCO2 to directly detect regional CO2 fluxes. We agree we can revise the wording to clarify the caveats of the work and improve its readability. We can do this by using the supplemental information to expand on more detailed tests and/or reducing our technical descriptions of each component of our analysis. Additionally, the CarbonTracker experiment was effectively an OSSE to see how much land signal can be extracted from the mass balance approach. We will clarify this as well as think more about the comment on LPJ reproducing what we see with the OSSE.