

Comments to the Author:

Well-organized valuable data product; thank for using ESSD.

Thank you for considering our manuscript for ESSD.

Two small inconsistencies:

1) Line 382: “Localized fits are minimized” I think you mean ‘optimized’? Or offsets or discrepancies are minimized.

Thank you for catching this. We have updated this sentence to read “Localized fits are determined by minimizing a merit function with the Levenberg-Marquardt method”.

2) Residual uncertainty - for this reader at least - about salt-water-influenced sites: Line 470 and following, including Table 1 and section 3.1.4: data set excludes coastal sites for valid reasons but includes salt marshes?k Seawater influence in both?

We agree that we could be more clear about the transition from discussing all FLUXNET-CH₄ sites, regardless of type, to only considering the freshwater wetlands. To address this, we have changed the Section 3.2 heading from “Wetland Representativeness” to “Freshwater wetland representativeness”. We have also added the following sentence in Section 3.2: “We exclude wetlands classified as “Salt Marsh” in this representativeness analysis and the seasonality analysis below because of the unique CH₄ --flux dynamics in saltwater ecosystems (as discussed in section 3.1.4), though we note that some of the coastal wetlands included in the freshwater analysis periodically experience brackish water (i.e.: US-Myb, US-Sne).”.