Earth Syst. Sci. Data Discuss., author comment AC1
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Reply on RC1

Jiye Zeng et al.

Author comment on "A new estimate of oceanic CO_2 fluxes by machine learning reveals the impact of CO_2 trends in different methods" by Jiye Zeng et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-71-AC1, 2022

Thanks to the reader for the comment.

Strictly speaking, YEAR was not included in training machine learning models directly. Instead, the annual increase rates of CO2 at decatal scales were extracted by an iteration mathod and the rates were used to remove the trend in CO2 measurements. The trend removed (or normalzied) data were used for training the models. The iteration method used machine learning to remove the dependence of CO2 on SST, SSS, MDL, CHL, LAT and LON and used linear regression to removed the dependence of CO2 on YEAR.

In addtion to citing the referenc of the iteration method, we will put the description in the next revision.