

Review on the egosphere-2022-525-manuscript-version2 (revised MS version) from Ryo Dobashi and David T. Ho

I thank the authors for their responses to my previous comments and the associated revised version of their MS. Most of my comments have been addressed and the revised version has been specified and improved. However, before publication in EGU sphere, significant improvement still need to be done in my opinion to improve the MS with regards to 1) the English language through an official English editing service or other options and 2) its scientific organization both for the Methods and the Results and Discussion sections. In the Methods section, there are 8 sub-sections that could easily be grouped in tracer measurements, environmental measurements (environmental variables, pCO₂, etc.), tracers, Sc number, k calculations/modeling. The same effort has to be done for the Results and Discussion section with homogeneous sections and associated paragraphs, explicit titles, etc. Here are as well below, specific comments that need to be addressed to help authors improve the MS.

Introduction

l.18: Why has parameterization changed between the submitted and the revised MS?

l.28-32: Reformulate the whole paragraph saying first seagrasses can also emit GES (CO₂, CH₄) and then giving the two examples for CO₂ emissions from CaCO₃ production and CH₄ emissions as well. In the Howard et al. (2017) study, it is not clear as it is written in the revised MS the link between the fact there is more IC than OC and the systems are CO₂ sources?

l.40: For k estimations from simultaneous EC and pCO₂ measurements, you can cite this work (though no obligation at all) to support your idea: Polsenaere P., Deborde J., Detandt G., Vidal L.O., Pérez M.A.P., Marieu M., and Abril G. (2013) Thermal enhancement of gas transfer velocity of CO₂ in an Amazon floodplain lake revealed by Eddy Covariance measurements. *Geophysical Research Letters*, 40, 1-7, doi:10.1002/grl.50291. Idem in l.50 for heat flux control on K for floodplain in Amazonia.

l.56: was instead of is

Methods

Pink squares are illegible, please change colour

Table 1 in Supplementary Material?

Results and Discussion

l.314 See Abril et al. (2009) ECSS 83, 342-348 to understand how and why turbidity can affect gas exchange (authors response to previous comment)

l.316 “seagrass conditions are similar”, please specify it in the revised MS. In consequence, I still (last previous comments) think conclusions on K relationships with seagrass dynamic and distribution and extension to other seagrass systems can’t completely done here.