

### **Revised points for Reviewer 1's comments:**

This is a very nice work and it brings us closer to understanding even more about the air-water CO<sub>2</sub> exchange. My only comment/question is, have you consider having longer measurement periods? As I see, there's only a couple of days available. What are the assumptions you are implying in the study if you only calculate transfer velocity for a couple of days? Can it be possible to have a longer period or different sampling periods during the year so you can implement seagrass phenology in the study design?

- Thank you for pointing it out. Even in short periods, we covered wide range of wind speed, and so the derived equation (7) can be used in different seasons if the wind speed is in the range and the seagrass condition is similar. For future study, it is helpful if we measured seagrass density so that we can discuss the relationship between seagrass and  $k$ . We discussed it as follows.

“Although the experiment was conducted over a short period of 8 days, our new parameterization, equation (7), fit the observations well; This implies that equation (7) can be applied even in different seasons and years if the wind speed is in the range of 0.12–12 m s<sup>-1</sup> and seagrass conditions are similar.”

“Specifically, measuring the seagrass density and conducting dual-tracer experiment simultaneously is needed to relate the  $k$  and vegetation distribution”