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Interactive comment on "Comparison of floating chamber and eddy covariance measurements of lake greenhouse gas fluxes" *by* E. Podgrajsek et al.

Anonymous Referee #2

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Comment on "Comparison of ïňĆoating chamber and eddy covariance measurements of lake greenhouse gas ïňĆuxes" by E. Podgrajsek et al.

p. 18310 line 7-8, "the two methods agree relatively well during some periods, but deviate substantially at other times." This kind of statements in fact give no information to readers. Should be specific and explain under what conditions the two methods agree or deviate.

p. 18310 line 22, ". . .better quantify. . ." It seemed that there is no result explained that how you quantify the terrestrial carbon sink better?

p. 18313 line 13. Why use the 4-6 chambers mean value? How about the results from

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these chambers? They agreed with each other or they showed any differences?

p. 18315 line 22-25. "The concentration. . ." when you calculated the concentrations of CH4 and CO2 in the water by using the syringe to collect the sea water, did you consider the temperature difference between the lab and the sea surface?

p. 18316 line 18-19. Please be specific. How the magnitudes of the difference when you claimed results in 2011 larger than those in 2012?

p. 18316 line 23. Figure 2 including fig. 2a, fig. 2b, and fig. 2c. In section 3.1, you just mentioned fig. 2a. If fig. 2b and fig. 2c were not necessary for the discussion, please delete them; otherwise some discussion related to them are needed.

p. 18317 line 6-7. When you compared the FC estimate of methane flux with EC method, which values were you used among those 6 chambers? Or did you use the average values of those 6 chambers? How about the difference among those 6 chambers in measured methane flux?

p. 18318 line 28. Change "then" to "than"

p. 18318 line 19-21. Explain why?

p. 18319 line 1-9. The discussion here is too uncertain; this is not a good way to prove your results, please find some more certain and powerful evidence.

p. 18319 line 19. Section "3.3.1" revise to section 3.4

p. 18335 Fig 8: The fig showed that the fluxes of CO2 were measured by floating chamber or calculated according to previous studies all showed smooth variations. However, the FCO2EC1 showed extremely large variations: they were jumping up and down. Can you imagine the drastic changes in a relatively short time period? Were they method errors? Please explain why.

Interactive comment on Biogeosciences Discuss., 10, 18309, 2013.