Biogeosciences Discuss., 12, C7680–C7681, 2015
www.biogeosciences-discuss.net/12/C7680/2015/

Biogeosciences Discussions
Open Access
EGU

Interactive comment on "Technical Note: Drifting vs. anchored flux chambers for measuring greenhouse gas emissions from running waters" *by* A. Lorke et al.

A. Lorke et al.

lorke@uni-landau.de

Received and published: 13 November 2015

Reply to Anonymous Referee #1

We would like to thank the reviewer for her/his positive evaluation and the very helpful comments and suggestions. Below we reply on each specific comment.

- 119 "the exponent was fixed to 0.5" could you please better explain why and for what this exponent stands, I am not sure every reader would know.

Reply: The exponent describes the dependence of the gas exchange velocity of a particular gas on the diffusion coefficient of this gas in water. It has been observed in

field and laboratory studies, that the exponent varies between -2/3 for smooth water surfaces and -0.5 for rough water surfaces. We would add this information along with appropriate references in a revised version of the manuscript.

- 337 I find a difference in flow of only 0.02 between left and middle very minor, is this correct or wrong spelled/written? Shouldn't the difference between those both speeds more?

Reply: The flow velocities refer to the mean flow velocities in the flume, without chamber-induced disturbances, and are correct. Due to technical limitations, we could only use a rather narrow range of flow velocities in the flume.

- 39 velocity can also be derived - 45 presence - 115 comma instead of point - 225 delete one "however" - 298 for up to 5 minutes every 30s: seems difficult for me or do not understand - 322 reference after point Fig. 1 "The solid line shows...

Reply: In a revised manuscript, we would correct these typos and improve the clarity following the suggestions of the reviewer.

Interactive comment on Biogeosciences Discuss., 12, 14619, 2015.