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Discussions

Interactive comment on "Technical note: CO_2 is not like CH_4 — limits of and corrections to the headspace method to analyse pCO_2 in water" *by* Matthias Koschorreck et al.

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The technical note quantifies the potential sampling error in estimates of dissolved CO2 concentrations from headspace measurements, which is caused by shifts in the carbonate equilibrium in the sample. I have been using the headspace method for estimating pCO2 in inland waters for many years. Despite being aware of the general problem, particularly at high pH, the associated error has rarely been considered or even quantified. The technical note provides an excellent analysis of the potential errors for a range of relevant sampling conditions in freshwater ecosystems. I consider the presented results as an easy way for checking the expected error for both planning

of sampling campaigns and for possible correction of the measurements. As pointed out by both reviewers, the limitations of the headspace technique for measuring pCO2 are more considered in the marine science community. I acknowledge the contributions that this technical note makes for increasing the awareness of this problem in the freshwater community and by providing quantitative error assessments and correction methods.

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