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Discussions

Interactive comment on "Lake mixing regime selects methane-oxidation kinetics of the methanotroph assemblage" *by* Magdalena J. Mayr et al.

Anonymous Referee #1

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The manuscript on "Lake mixing regime selects methane oxidation kinetics of the methanotroph assemblage" by Mayr and Zimmermann et al, is a well written manuscript on the ecophysiology of methanotrophic bacteria.

I only have the following remarks: Method section on the kinetics: - As you describe in detail how you eliminated outliers from the calculations I was wondering what the percentage of outliers was? From my (more marine) experience it is difficult to get good kinetic data, as many of my "Kinetic incubations" only gave erratic results. . .. - Filtering the samples water on the 0.2 ym filters. How long did it take to filter 1 – 2 liters on such a filter?? To my experience this may last very long. . .. Thus, did

you use any prefilters? And could the RNA composition change of this presumably longer time?? Result /Discussion - Figure 1: I think it is essential also to show the methane concentrations, in situ MOXrates and also the cell numbers in one figure, as the "environmental background information". The second part of fig. 1 the kinetics should go in a separate figure, as this is more an experimental aspect. - Comment on figure 2: to me another way of seeing the data is, that in the epilimnion Km is much higher in October, but is getting more and more similar to the hypolimnion. Thus it is not a mixing of two compartments but more of an approximation of the epilimnetic traits to the hypolimnetic ones ??

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