

Charlottesville, Nov. 2, 2015

RE: Manuscript bg-2015-183: “Technical note: Time lag correction of aquatic eddy covariance data measured in the presence of waves”

Dear Jack,

Thank you for your final acceptance of our paper. Below is a copy of your acceptance note, with the action I have taken written in red.

All the best, Peter

Associate Editor Decision: Publish subject to technical corrections (01 Nov 2015) by Dr. Jack Middelburg

Comments to the Author:

Dear Peter:

Thanks for submitting this nice paper to Biogeosciences. I have read the revised version and I am happy to inform you that your paper is now accepted for publication in Biogeosciences.

While reading I identified the following minor points:

-p 2, l. 21: while I applaud that you make available all basic data, this is no information for an abstract. You already mention at the end of the introduction and end of the paper. That should be enough.

The sentence was removed from the Abstract.

- all through, the readability might improve if you would use hyphen multiple adjectives (Deep-sea research vs. deep sea as a noun). Examples: time-lag bias, time-lag correction. Please discuss with your native speaking co-authors. I leave it up to you.

We have discussed this and decided to leave it as is.

p. 12, bottom part: does the time-lag bias not also depend on the flux, the higher the flux, the larger the gradient, all else being the same.

Yes. This was stated as point 3) on page 6, bottom. We have clarified this on page 12 as well. The sentence now reads: “Additional model calculations showed that the maximum bias, relative

to the real flux, diminishes rapidly at increasing current velocity due to enhanced turbulent mixing, which reduces the vertical oxygen concentration gradient (Fig. 3, Appendix A).”

p. 16, line 23: why should it be coated with phyto-detritus (only). Microbial biofilms might be another option.

Because the increase in time shift happens rather abruptly, we do not think this is caused by a microbial biofilm gradually growing on the electrode tip. However, it could be caused by drifting marine mucilage. We have added this, and the sentence now reads: “The most likely reason for the large shift is that the electrode tip was damaged or coated with phyto-detritus or marine mucilage near the beginning of the deployment, notably at min ~460 (Fig. 6C), when the time shift doubled from a value well below 1 s.”

Section 5 (summary and recommendation). This section comprises 4 very short (sometimes one sentence only) paragraphs. Why not merge them?

We have done so.

p. 24, line 34 and p. 25, line 2: it is F.J.R. Meysman (R is missing).

Fixed.

With best regards,
Jack Middelburg, Associate Editor