

Review of the manuscript JTECH-D-19-0087-R2, “Smoothing and Interpolating Noisy GPS Data with Smoothing Splines”, by Jeffrey J. Early and Adam M. Sykulski.

The authors provided a detailed response to my comments and to those of the other reviewers. I appreciate the inclusion of a new section discussing how the proposed methods compare with other techniques, and the author’s efforts to shorten the manuscript. I maintain my position that this paper will be of interest for JTECH readers as it provides a practical method for processing drifter data, although I also think that some passages of this new version of the manuscript can be reworded to improve clarity.

My comments correspond to a Minor Revision. Please find them below.

- Equation (9): Please explicitly define the variable ω (frequency) in the text immediately following the equation;
- Lines 136-138: The paragraph still does not mention how the synthetic velocity signals used in the analysis can be obtained from Equation (9). I requested including this explanation in my previous revision, to which the authors responded that it is already provided in Lilly et al. (2017). However, that is a rather long and technical work, reason for which I think that it would be a good idea to avoid making the reader go through the Lilly et al. (2017) paper by briefly describing this relevant step of the analysis in the text;
- Line 310: Please define the acronym “mse” (used later in the paragraph) after “mean square error”;
- Line 315: Please rewrite as “This means that, when handling large datasets, we can ...”;
- Lines 352-363: The definition of “blind” and “unblind” methods is scattered throughout the paragraph. Specifically, the reader is presented to the meaning of “unblinded” estimates in line 355, while the next sentence (line 358) mentions “blind” methods without explicitly defining them (its meaning is provided in the following sentence). Please rephrase this paragraph to improve clarity. I suggest explicitly defining what is meant by “blind” and “unblind” methods in the beginning of the paragraph after presenting Table 2;
- Equations in Section 8 are referenced without parentheses, i.e. Eq. 8 instead of Eq. (8). Please correct all occurrences of this issue;
- Section 8: I think that the discussion could use a punch phrase, summarizing why/when the proposed methods are preferable to the other mentioned techniques.