

Interactive comment on “The Sea State CCI dataset v1: towards a Sea State Climate Data Record based on satellite observations” by Guillaume Dodet et al.

Anonymous Referee #1

Received and published: 17 April 2020

May I add a brief note about the paper. Actually, I have very few things to add respect to what I already said about the product user guide accompanying the dataset, and about the dataset itself.

It's a clear and well readable paper. Differently from the accompanying document, this paper looks almost immune from typos and grammar errors. My comments are substantially reflecting my impression in analysing the dataset and its accompanying doc, which I revised few days ago.

In my opinion the explanations given in Section 3 are convincing, in particular I like the description of the de-noising method. Also, I find Fig. 9 very informative, but, you'll find

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just one question about it below (in “Technical points”).

I still think that calibration/validation need further expansion (Section 4). Under this point of view, the science paper can adhere to the expansion suggested for the product user guide.

Also, for what regards Section 5, a further discussion of the regional trends identified in Sect. 5.2 may be helpful to many potential users.

Here I have some technical points

- Page 2, lines 12-15: please provide either two lines of explanation or cite a reference to justify the effect on sea state.
- Page 5, lines 17-18: as I suggested in the previous note, characterization of SWH for buoys < 200km can be interesting for many users.
- Page 14: I'm not convinced by the x-axis notation (wavenumbers) in Fig. 9: does it span 1000 to 20 cycles/km going left-to-right? Seems contradicting the bandwidth reduction for higher order modes.
- Page 15, line 23: is the subject of the sentence “It highlights...” still “Figure 9”, mentioned 5 lines earlier? Please put an explicit subject.
- Pages 17-18: please note that legends and axes' texts are hard to read in Figures 10 and 12.
- Page 18 lines 13-17: If you calculate and show the differences between CCI and the dataset by Ribal and Young, you make the reader curious at least to get some conjecture about reasons to justify the differences. I suggest at least to specify the main differences (e.g. filtering) there.
- Page 19 line 25: “. . .several locations worldwide which” → “. . .several locations worldwide, which. . .”

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- Page 21: Fig. 14 is particularly small, especially the left pane individuating the regions of interest.

- Page 21 line 3: "...dataset exit..." → "...dataset exists..."

- Page 21 line 5: "...buoy datasets which include..." → "...buoy datasets that include..."

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2019-253>, 2020.