

**Reply to Editor:**

*Thank you for addressing the reviewers' comments. Both reviewers find your revisions adequate and recommend publication. I would like to request a few minor technical corrections before publication (without further review).*

Thanks very much for your helpful comments and suggestions. Our responses to the comments are as follows. The editor's comments are cited in italics.

*Please define the "appearance frequency" in the caption Fig 1b. If this is the same as the front frequency, FF, you can cross-reference Eq. 4.*

Thank you for pointing out this issue. Yes, the "appearance frequency" is the same as the front frequency. We have added a cross-reference to Eq. 4 on line 47 of the revised manuscript.

*Just above Eq.4, you can insert: "The front frequency of each pixel, also referred to as the occurrence frequency of front, was ..."*

Thanks for your suggestion. We have made this change in the revised manuscript.

*Typo in Table 1, F8, Akashi (missing i)*

Thanks. We have corrected this typo in the revised manuscript.

*In Fig. 2 and 3 (but also consider for Fig. 4, 7 and 8), the pink lines are not clearly visible. Could you plot a thicker white line behind the pink lines to make them stand out?*

Thanks for your suggestions. For better visibility, we thickened these pink lines and added thinner white lines on top of them in these figures.

*Caption of Figure 15: It would help the reader to describe this figure. You can start with "Evolution of the different terms of Eq.(5) and the tidal current in the cross-front direction for the front F1 during the nine identified phases of the semidiurnal tidal cycle". When you write "...the current phase (...) and the previous phase (...)", current is confused with the ocean current. Please consider rewording as, for example, "at two consecutive phases (solid green line for the selected phase and the dashed green line for the previous phase, for reference)." "*

Thanks. We have revised this caption in the revised manuscript following your suggestions.