Response to Report of 11 Jun 2026 of Anonymous Referee #1

Note: Line references (L…) refer to the resubmitted version of the manuscript unless explicitly referring to the previous submission of the manuscript as (previous L...)

> I have read the new version of the paper, and although the authors addressed most of my previous comments satisfactorily, they unfortunately missed the opportunity to address two of them. In my opinion, these two comments are crucial to make this paper ready for publication (see more details below). In addition, I have a few small suggestions regarding the last version of the paper.
>
> Major comments
> The first comment is regarding the interpretation and discussion of Fig. 5 in section 3.2. In my previous comment, I mentioned that the explanation and interpretation of Fig. 5 is too limited. The authors added one sentence. In their response, they mention that they "intend this figure to be a reference table rather than a test that is then discussed". Even if the authors intend this to be a reference table, it is important for the reader to understand what the table means and to place it in context to be able to use it as a reference. It might be that this sort of matrix is second nature for the authors, but they should consider that this is not so in general. There is also another new sentence in this paragraph ("Since we use…"), but it is difficult to understand what the point is.

We extend the description of Fig. 5 both in the caption and discussion of Section 3.2 (L290), to more clearly explain the contents and to extend the interpretation of the results.

To clarify the sentence ("Since we use…") of (previous L262), we add a paragraph at the end of Section 2.2.6 Characterization of Transitions (L241). The goal here is to clarify the separation between the grounding statistic and the characterization of the transitions events. The characterization of the transitions is based on the manual labelling, and the grounding statistic is not suitable for the detection of transition events without further adaptations or processing. We accentuate this separation in a few other text passages (L5) (L118) (L122) (L130) (L223) (L339) (L343) (L346) to make the description of the grounding statistic more precise, and rename the statistic to "grounded statistic".

> The second comment is that there is "little attempt to explain the physical mechanisms behind what is observed..." It might have been a misunderstanding. To clarify, I am not talking about physical mechanisms at the small scale, but at the large scale as discussed in the paper. In their response, the authors say that "in this paper, we look at the possibility to detect grounding from data only". However, they also say in the paper (l. 226): "We want to identify environmental conditions and other factors that explain the observed groundings…", and this is clear from the paper.

We add a discussion of the observations at large scale, extend the description of the two clusterings in Section 3.1 (L252), and relate our findings to previous work.

I point out that the other reviewer also mentioned that “the discussion of results is very limited.” There are six large figures of results with a lot of information, but they are discussed in 1.5 pages of text. So, I really invite the authors to consider extending their description, interpretation, and discussion of the results in particular Fig. 5 and the physical phenomena behind what is observed.

We have extended these passages as described above, and also added a paragraph in Section 4 Conclusions (L361).

Minor comments
l. 66 change “were” to “was”

OK.

Caption of figure 1: There seems to be something missing in the last sentence

OK.

L. 113 and Caption of figure 2: I think that I finally understand that the water level is obtained from a MATROOS dataset. Is this correct? I suggest being more explicit on line 113 about what is meant by the “sea-conditions” or making a change in the caption of figure 2 from “water level dataset” to “water level from the MATROOS dataset”.

Yes, the water level is obtained from a MATROOS dataset, we update the corresponding text passages to make this more clear (L110).

L. 200, change “an uniform” to “a uniform”

OK.

L. 331, change “west” to “westerly”

OK. For (previous L331) we assume the passage referred to is “… The drifters were in the water during prevailing west(erly) wind, …”.