

Interactive comment on “Characterization of bottom sediment resuspension events observed in a micro-tidal bay” by Manel Grifoll et al.

Anonymous Referee #1

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Manel Grifoll et al. presented hydrodynamic and turbidity data from both field observation and computational model simulation at Alfacs Bay (NW Mediterranean Sea) to investigate the sediment transport or resuspension mechanism in that area. The topic fits well with the themes of Ocean Science. The study would be a valuable knowledge input for future coastal management in that area. However, data presentations and interpretations, terminology and languages need to be improved a lot. Revision is suggested at this stage. Point-by-point review and comments are listed below. Some typos and sentences are listed, but are not limited to.

2. Methods 2.1 Study Area Line 75: Not sure is a typo or not. “shouthern (southern) spit” 2.2 Measurements campaigns It may be more straightforward if the authors use a table to show most of the sensor information. Line 106: How high is the wind monitor

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above ground? 2.3 Current and wave model implementation Line 130: (10' data) not sure what it means. Or it's typo. Line 139: Equation (1), all terms in the equation need to be noted, e.g. u , v , etc. 3. Results 3.1 observations

Line 156-157: Terminology. “current speed” and “wind speed” are normally used in scientific papers, instead of “current intensity” and “wind intensity”.

Line 161: Data for 1st and 6th October are not shown in the MS. If the authors prefer to make a statement about October observation, it would be better to add a supplemental figure for October observation. Otherwise, there is no support for the statement that “this seems evident during the 1st and 6th October”.

Line 172-173: the data covering for August 3rd during E1 has been reported in the format of day and hour, but for events E2 and E3, the authors only report in the format of day without hour. In the figure, E2 and E3 do not cover the whole day on 6th August and 7th and 8th in August, respectively. I would suggest to report all three events in the format of day and hour.

Line 167: What is the reference for the sea level height, e.g. “sea level height in A1”? In figure 2(c), sea level height of 0m is referred to what?

(1) For figure2, if the authors add minor tick (in hour unit) for all the x-axis, which would be easier to follow when read the related interpretations. (2) For Figure2(b), y-axis could use major tick at 0, 90, 270, and 360, and minor ticks could set with an interval of 30, which would be easier to follow with the related interpretations. (3) Typos on the date expression, e.g. 3hd August, 3th August, which should be 3rd August.

3.2 Skill assessment near the sea bottom

Related Figure should be referred in this section (It should be Figure 4).

Line 179-180: Grammar mistake, “because they have ... and as a mechanism of resuspension”.

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3.3 Modelled bottom stress

(1) Day and hour format are suggested to use for all events discussed. (2) Figures 5 and 6 have left panel and right panel, which are either different stages or different events, but in the data interpretation text, the authors refer to the entire figure, e.g. line 192 bottom stress (figure 5), in which the authors mean left panel of figure 5. The interpretation for figure 6 also has the same problem. It would be more readable if the authors make it clear which panel they are discussing. (3) Typos for the date in both text and figure 5 title.

Line 195-196: grammar mistake for this sentence.

Line 204: Figure 7 is cited here for E1, without any statement why E2 condition is used to explain E1 before the figure 7 is cited.

4. discussion (1) Line224-225: Clarify which panel of figure 5 is discussed here. (2) Line 251: typo. "corresponds". (3) Line 254-255: Clarify which panel in Figure 6 is discussed here. In addition, this sentence is difficult to follow. (4) Would suggest the authors to rewrite sentences at Line 235-236, 245-247,254-255, 273-275, 286-287, 318-319.

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