

## **Reviewer #1**

**Thank you to the authors for taking my suggestions on board.**

**A few minor things remain, but these are mostly technical corrections.**

### **Abstract**

**L16 I'd suggest to replace 'such as buddy checking, detection of attenuated data, among others,' by 'such as buddy checking and detection of attenuated data,'.**

*Done*

### **Introduction**

**L23 Climate Change = climate change**

*Done*

### **Section 2**

**L8; the data dealt 'with' in the quality control?**

*Done*

### **L17 'Thematic'**

*Done*

### **L20 'in situ observations'**

*Done*

### **L29 NRT data products**

*We call these observations that have gone through an automated quality control a "product".  
We call the reprocessed observations "products", as well.*

### **L30 up to date = for now, or, until this date?**

*Done*

### **L30 'such as the Global Extreme..' (remove 'the ones owned by')**

*Done*

**L32 rely = relies, effort = efforts**

*“Rely” means that both databases “rely”. We have changed “effort” to “efforts”.*

**L39 ranging = starting ?**

*It is ranging from 1886 to 2019.*

**L41 remove ‘factual’?**

*Done*

**L43 ‘the north-west European shelf’? though this suggests that tide gauges are placed in the sea. ‘The north-west European coast’?**

*The IN SITU TAC classifies the region as the “north-west European shelf”, despite it actually being the coast. It is not fully accurate, but it is better identified with this name.*

**Section 4**

**L8 can flag = flagged?**

*Done*

**L11 considered = assumed?**

*Done*

**L30-36 = If the buddy checking only considers stations within 1 km of each other, how many stations does this affect? It will not be a lot of stations where this module is used?**

*Sometimes we do not find any eligible neighbor to do the buddy checking.*

**L1 worse precision = reduced precision?**

*Done*

**L7 ‘this was only sustainable’ – can you please rephrase, not clear what this means?**

*(Section 4, L7-9) We have rephrased: “The software was only computationally possible on a time window of 15 minutes, the one used for NRT quality control. However, the reprocessing of extensive series in a delayed-mode reprocessed product was very costly.”*

**L10 ‘tackled all time t’ – can you please rephrase, not clear what this means?**

*(Section 4, L11-12) We have rephrased: “One change is that, while the version of SELENE used in the NRT process dealt with every time  $t$  to find spikes, the delayed-mode reprocessing*

*starts the detection of spikes only in specific cases. "*

## **Section 5**

**L29 'according to the EEA' – can you provide a reference?**

*We proceed to reference to the website, listed in the References.*

## **L32 Atlantic Ocean?**

*(Section 5, L32) We have completed the sentence: "The areas with the most extreme water levels are the British coasts in the Irish Sea, as well as the French coast in the English Channel, both near the Atlantic Ocean. "*

## **Section 6**

**L12 the mentioned upgrade = the upgrade**

*Done*

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## **Reviewer #2**

### **General comments :**

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The main objective of this article is to present the reprocessing strategy used by the Copernicus Marine Service to compute a new delayed-mode sea level product based on the reanalysis of many tide gauges timeseries. This objective is of major interest for the scientific community and more broadly for many coastal engineers using intensively tide gauges data to design coastal defences for example. The number of stations included in the new product is very important (#639) and the effort made to achieve this reprocessing is huge. The revised version of the manuscript has taken into account many of the comments made and this version has been improved. The Abstract/Introduction reads much better now, with a clear and synthetic introduction and the presentation of the Copernicus Marine Service in section 2 is clear and comprehensive. The section 3 and 4 are informative about the different processing used by the Copernicus Marine Service. Section 4 give a simple example of application for this dataset. Although this article isn't strictly speaking a scientific paper, but rather a briefing note on a new product of interest to the marine level community, I suppose it deserves to be published in a journal with a wide readership.

### **Technical corrections :**

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**P2, L17 : replace Thmatic by Thematic**

*Done.*

**P8, L3: There is a pb with the Pugh et al reference**

*Corrected.*