

The authors generally responded to my questions and I think the article is acceptable for publication.

There were a few cases where they stated that they responded to my request but the requested change is not in the manuscript:

*RC: L82: The IG wave signal used by Crawford and Webb was not recorded by a hydrophone, but by a differential pressure gauge. Differential pressure gauges, nano-precision bottom pressure recorders or broadband hydrophones can be used to measure the IG wave signal, though I'm not sure if broadband hydrophones are sensitive enough below their corner frequency.*

*AC: Thanks for this remark. We replaced "hydrophone data" by "differential pressure gauges".*

Not changed (L115 now). Should replace "hydrophone data" by "pressure data".

*RC: L136-141: These details of the LOBSTER OBSs development aren't relevant to the method or the data presented.*

*AC: We removed this part from the manuscript.*

Not removed (L176-181 now)

*RC: L175-176: Repeats previous lines.*

*AC: The sentence is removed.*

Not removed (L216)

*RC: L 235: Why 2%? Is this a parameter you set? Or an observation of some separation in S-values?*

*AC: We use a threshold for picking the highest similarity. We choose the upper 2% of the time frames with highest S values as the similar frames. We modified the sentence and added the term "the upper" to make it clear.*

Actually it was already clear that this was the upper 2% (but the change in text is fine): my question was: why 2%?

Also, Make this a parameter in Table 1

*RC: Eq 7: Use the same emphasis in the equation as in the text (N and N' are bold in the text, but italicized in the equation)*

*AC: Within the whole manuscript, we used bold for the variables in the text and used italic for the equations.*

I don't see how this could be a good idea, but I leave it to the manuscript preparation team to decide.

*RC: L445: "in the range of the signal frequencies" repeats, remove it. "0.05 to 0.2 Hz": you give a frequency range here but the figure only shows periods.*

*AC: The dispersion maps show that noise energy in the range of the signal frequencies is removed successfully for periods between 5 and 20 s. Longer signal periods which are weakly visible in the noise-free image (Fig. 5d) can only partially be recovered.*

The response is not adapted to my comment, which was simply about 1) improving grammar and 2) avoiding inverse units between sw s the text and the figure

*RC: Figure 2b: put units on axes of spectrogram plots*

*AC: Thanks for the suggestions and corrections. We applied all....*

The spectrogram plots still do not show axes units

I also recommend the following changes:

69-70: the sentence about projection of horizontal signals onto the vertical channel is not relevant to this article.

119: “subsequently” is not the right word: “in sequence” is one better option.

120 and 122: Remove “adopt HPS using”

129: “Loose cables” doesn’t explain anything, especially if you are referring to the rope connecting the OBS to the recovery buoy, which is not technically “loose”

178: “In the context of HPS, one of the simplest and fastest approaches...” => One of the simplest and fastest HPS approaches...”

215: “In range two avoiding the frequency range of 0.1 to 1 Hz”. This is redundant. Moreover, you refer to range one and range two here, but later on you explicitly name the frequency range and in Table 1 you refer to “Frequency range for MED” and “Frequency range for SIM”. I recommend using “MED frequency range” and “SIM frequency range” everywhere, which will make the reading clearer and should also help the reader to understand the reason for separating these ranges.

255: Why do you use soft masks rather than a binary mask?

292: “waiting time” => “waiting factor” as on line 290.

304: “the mentioned frequency range” => “the MED frequency range” (or SIM, it’s hard for me to tell/remember as it is currently written).

516: “MIR” => “Music Information Retrieval”, as may readers will skip to this Conclusion

538-539: Remove this sentence, a “conclusion” of the “Conclusions” section is redundant

Table 1: Simplify parameter names and add the 2% term from line 238.

And the following grammar corrections:

*“is” used too often/inappropriately*

39: “is often dominating” => “often dominates”

51: “is originating” => “originating”

51: “is originating” => “originates”

138: “is highly affecting” => “highly affects”

288: “is separating” => “separates”

394: "it is an indication" => "they indicate"

*Overuse of "the":*

102: "~~the~~ music information"

253: "~~the~~ repeating and ~~the~~ nonrepeating"

297, 303 & 335: "the Sect. 2" =? "Section 2"

301: "the Sect. 3.2" =? "Section 3.2"

345: "~~the~~ Table 1"

384: "The ~~w~~hole amplitude and ~~the~~ phase information..."