

Response to the comments:

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.

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

AC: Now it is replaced. (Sorry for the mismatch, it was an inadvertent mistake.)

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

Not removed (L176-181 now).

AC: Now it is removed.

RC: L175-176: Repeats previous lines.

Not removed (L216)

AC: Now it is removed.

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.

AC: The parameter is added to the table. As it is mentioned in the text "We choose the upper 2%", so this is the parameter we set and it is a good suggestion to add it to the table.

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.

AC: Now we use italic both in the text and equations.

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 the text and the figure.

AC: We modified the text and improved it. Also we modified the figure so now we use Hz as the unit of frequency both in the figures and in the text.

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.*

AC: The plot is modified and all the units are now shown on the axes.

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

AC: The sentence is now removed.

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

AC: Now we replaced it.

RC: *120 and 122: Remove “adopt HPS using”*

AC: We removed it.

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”.

AC: We modified the sentence and remove the term “loose”.

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

AC: The sentence is modified according to the comment.

RC: *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.*

AC: That is a good suggestion. We use the suggested term now.

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

AC: Soft masks are more flexible than binary masks and usually lead to better results; it’s not very often that all of the energy in a mixture can always be assigned to one

source. We added a brief explanation about this to the text and more detail can be found in the related reference (Vaseghi, 1996).

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

AC: Now we replaced it.

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

AC: We use the suggested term now.

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

AC: We added it.

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

AC: The sentence is removed.

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

AC: We simplified the parameters and added the 2% term.

All the grammar correction are applied according to the suggestions.