The authors would like to thank the reviewer for his thoughtful and useful comments on our paper. We have considered all the suggestions. Our point-by-point responses (R) to comments and questions (Q) are detailed below:

Q1:

This paper present a nonlinear phase coupling analysis of focusing wave groups propagating over a slope. Focusing wave groups with three different spectra , Gaussian, P-M, JONSWAP were generated in a wave flume. ***But, only three wave groups are discussed***. Actually, the topic of this study is not new. Spectral and bi-spectral analysis of irregular waves over shoal have been presented previously. ***I think the new aspect of this paper is presenting bispectral analysis for waves with different spectral types.*** My comments are outlined as follow.

R1:

We would like to thank the reviewer for the comment. One wave train from each spectrum was selected to be detailed in the text in order to avoid, as much as possible, unduly redundant results and text. Each selected wave train has the strongest steepness in its spectrum type. An important objective of this study was to investigate strong steepness wave trains. The spatial evolution of bicoherence of the other four wave trains are summarised in the last figure (Figure 11) in order to investigate the impact of the steepness on the spatial evolution of the phase coupling.

A new paragraph has been added in the conclusion (Line 336-344) in order to summarise the new aspect of this paper, which is as mentioned by the reviewer "presenting bispectral analysis for waves with different spectral types".

Q2:

Page 2, lines 47-47. The authors argues that "It is important to mention here that resonant interactions are not easily achieved in unidirectional wave train propagation since the resonant conditions cannot not be satisfied in a small area. ", I think it is better to specify that this is only true in shallow water. As for deep or intermediate water depth, resonant interactions is very strong in unidirectional wave trains.

R2:

We completely agree with the reviewer. We have added 'shallow water regions' to this sentence. Line 47.

Q3:

The reference Guohai et al. 2008 should be Dong et al. (2008).

R3:

I have corrected this error throughout the manuscript (Lines 35, 51, 62, 142, 143, 151, 154, 308 and 327).

Q4:

Fig. 3, There is a mistake in captain: JONSWAP (gamma = 7) (Test 7)

R4:

I have corrected this error and changed $\gamma = 3.3$ to $\gamma = 7$ (Line 199).

Q5:

Where is the incipient breaking points and spatial range should be presented in the text.

R5:

I would like to thank the reviewer for this comment. The presence of the incipient breaking points and spatial range in the text is crucial for a better understanding and have been added in lines: 186, 186, 187, 202, 237, 247, 259, 284 and 285.

Q6

The authors should concentrate on the analysis of difference biphase coupling for different spectra?

R6

I agree with the reviewer. Information concerning the phase coherence can be obtained by calculating the biphase parameter (β (a_1, $a2$)). It will be interesting to quantitatively measure the deviation of biphase values between primary waves/higher harmonics and to analyse their spatial evolution through different spectra to distinguish differences. This text was added to the manuscript (conclusion and perspectives) (Line 353-355)

In this study, we wanted to exclusively study non-linear wave interactions through the spatial evolution of the bicoherence. In our future work, we will continue to examine this issue on selected high nonlinear wave groups by investigating accurately the spatial evolution of the biphase. It would also be useful to compare it to the results found in Ma et al. (2010).