

Interactive comment on “Storms or cold fronts? What is really responsible for the extreme waves regime in the Colombian Caribbean coast” by L. J. Otero et al.

L. J. Otero et al.

ljotero@uninorte.edu.co

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Thank you very much for the observations and comments of referee 1. They have been very useful. Regarding to the database used, it was changed for a 30 year WW3 program extreme wave reanalysis, which covers the period from 1979 to 2009. The extreme regimes were calculated again, as so were the wave roses. According to the new results, significant changes are seen in San Andres Island, which were also mentioned in the text. Likewise, changes presented in other spots were also modified in the text. In general, it is confirmed that the influence in the cold fronts extreme wave regime and the hurricanes changes depending on the Colombian

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Caribbean zone. References were included about the reanalysis database used, and so were references of wind fields, the WW3 model and on the validation of the database. Although the recommendation to include the Buoy position chart is valid, it is not included due to lack of space. However, if it is absolutely necessary, it will be included. The hurricane issue is solved for a period of 30 years. Concerning specific comments, - “Reanalysis buoys” is corrected. What we mean is Virtual Buoys. - Data from Buoy 41195 were not used because they were discontinuous and covered very short periods. They were checked against Buoy 41194 data and it was decided to use only the latter because it covered a longer period. - On page 3031, line 20, when we mention “in this case”, we refer to the analysis of the used series for the article due to the fact that the selection of the adjustment parameters of the Gumbel distribution depends on the number of data. In this case it was 15, but now it has changed because now it is 30. - On page 3033, lines 1-5, what is indicated is that the extreme wave regime is calculated by extracting the maximum significant height value that is registered in a determined season. In other words, for the cold fronts season it is only extracted the maximum annual from the registers of December through May. For the hurricane season, it is extracted only the maximum annual for the period of June through November. - The suggestion to delete the term “probability of exceedance” is accepted. - Regarding figure 9 and the reference in the results of this figure, they were deleted from the text. - Regarding the last paragraph of the page 3037 and the first one of page 3038 Ortiz 2012 analyzed the passage of hurricanes from 1900 to 2013, and established that 17 events affected San Andrés Island. It was also established that Hurricane Joan was the most important. Ortiz 2014 modeled this hurricane for San Andrés Island. According to this result, the H_s generated by Joan in the coinciding point of the Bv-15 was 5 m. It is pointed that at this height corresponds to a return period of 25 years, in the light of the regime constructed for this work. - Figure 4 was corrected. - Technical corrections suggested were done.

Please also note the supplement to this comment:

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<http://www.nat-hazards-earth-syst-sci-discuss.net/3/C2204/2015/nhessd-3-C2204-2015-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 3, 3023, 2015.

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