

## ***Interactive comment on “LIDAR vs. GEODAS land elevation data in hurricane induced inundation modelling” by M. Peng et al.***

### **Anonymous Referee #1**

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This paper compares the storm surge model results using two different bathymetry datasets: the LIDAR and GEODAS. It was found that the two could give quite different results for the maximum inundation. It was implied that the LIDAR data might be more accurate since LIDAR includes the more recently constructed structures and it has better resolution.

It seems to me that the difference in the model results with the two different bathymetry inputs is an expected outcome and a comparison between the two input files should be sufficient to provide some implication to the model outcomes. The exercise did not really advance our understanding of the storm surge or provide a clear indication as to which dataset (LIDAR or GEODAS) is better. A more straightforward approach would be a direct comparison between the two bathymetry files and see what is the difference

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and find out why and which one is more reliable. That would probably be more useful than the current exercise.

Based the above thought, I suggest that the authors should at least add some additional discussion between the bathymetry data and make an effort to interpret the difference in the model results. It would be even better and more useful to provide some validation of either of the datasets using actual measurements at a few points, but this might not be practical for the authors so I will not insist. Could you also make a more conclusive statement about the usability of either LIDAR or GEODAS for storm surge forecast in the study area? Could you compare some actual storm surges with observations and validate your conclusion (say LIDAR leads to better predictions)?

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Interactive comment on Ocean Sci. Discuss., 4, 399, 2007.

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