

Interactive comment on “Multivariate extreme value analysis of storm surges in SCS on peak over threshold method” by Y. Luo et al.

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Thanks for your reading and suggestion. I am very sorry for my late reply. I will respond with your proposal.

â“ The introduction is unclear. The authors describe methods instead of introducing the scope and motivation of the study. Moreover many information on Extreme Value Theory are misleading. In the section Introduction (line 4) the authors report that "the Multivariate Generalized Extreme Value Distribution (MGEVD) is the natural distribution of annual maxima". It seems that the MGEVD works only with annual maxima whereas it is defined for each block of time. Differently from what is written in this manuscript, the MGEVD does not "ignore the multiple severe storm waves that occur in the same

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year" if it is applied to a block period shorter than one year (e.g. one month, three months, etc...).

The introduction has been changed following the suggestions.

In the paper, the sentence is "AMS method often ignores multiple severe storm waves that occur in the same year". So it does not mean that a block period must be one year, because I only said AMS method.

â“ Introduction line 27: If the MGEVD is the natural distribution why the authors use another distribution? The reason I choose the MGPD is MGPD is the natural distribution of MPOT.

â“ The method description is confused and explained in general without any reference to the considered variables. The method is new one for ocean sciences. "In the paper, we stick to the MGPD definition of Falk et al. (2004)", this is my reference for the method.

â“ Section 4. In the introduction the authors wrote that the MGEVD is the natural distribution for annual data but that they have preferred to use a Peak Over threshold method. In this section it seems that the author are using the MGEVD contradicting what was stated in the introduction.

Accept it. The introduction is bad, and I will change it.

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