

## ***Interactive comment on “The selection of directional sectors for the analysis of extreme wind speed” by Pedro Folgueras et al.***

**Anonymous Referee #2**

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The paper present an original method to be employed fro the selection of directional sectors for the analysis of the extreme wind speed in order to develop design of structures exposed to wind action. I found the subject of the manuscript relevant for NHESS and I think that it could be of interest for other scientific and engineering field such as, for example, coastal and offshore engineering. The formulation of the problem, the presentation and the discussion of the results are clear and adequately extended. I have some comment and observation about some aspect of the analysis presented by the authors: a) The authors decided to employ a criterion for the selection of directional sectors based on different statistical requirements and indicators. What could be the difference by the use with some sort of clustering techniques (k-means for example, or similar)? Could the authors comment on this point and eventually add some discussion

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in the paper b) I would make dimensionless the global indicator: instead of varying between 0 and  $\sqrt{3}$  I would make it varying between 0 and 1 c) I would add some plot about the minimum data for sectors and subsectors (first paragraph of section 3.4) d) I would put the x scale of figure 4 for criterion C0 varying from 0 to 360 in order to have a visual comparison with Criterion 45 and 90 e) May be I miss something but I do not understand why  $\sigma_s$  and  $u$  are in [m] in table 3 f) I would add bound conditions in table 3 in order to have a clear defined picture of the quantities involved g) There is any effect on the results on the choice of different inter arrival time (different from 5 days)? h) It is not clear to me how the threshold has been chosen (and it would be nice to have indication about changes in the results depending on the threshold) i) in last line of page 7 there is a typo "rfrg"

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