Interactive comment on "Defining scale thresholds for geomagnetic storms through statistics" *by* Judith Palacios et al.

Anonymous Referee #3

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The paper attempts to define some threshold levels from statistics in several magnetic indices. The initial idea was attractive because it promised to give some values which could be taken as more "objective" respect the usual ones. However, the results fail in the sense that the resulting thresholds values are disconnected from the physical causes that origin those disturbances either from the consequences provoked by them, which, in fact, are the purpose of this journal. Moreover, defining the threshold as the intersection of the cumulative of a model distribution and the data distribution looks more a mathematical artifact than a fact. To take advantage of the work done, I'd suggest to the authors to submit this paper to another more academic journal changing

the scope by prioritizing the description of the magnetic series rather than defining thresholds with heterodox methods.