

## ***Interactive comment on “High-resolution analysis of 1 day extreme precipitation in Sicily” by M. Maugeri et al.***

### **Anonymous Referee #1**

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The topic of the manuscript “High-resolution analysis of 1 day extreme precipitation in Sicily” is of high interest as well as the analysis carried out by the authors. However, I think the text should be carefully revised and simplified. Some of the “methodological recommendations” the authors want to convey should be revised because they are not fully supported by the results and considering that the aim of the paper (as far as I understand) is to provide a characterisation of precipitation extremes over Sicily. The aforementioned recommendations involve: homogenisation and extremes, superiority of RFA, methodological drawbacks of other approaches, inference method. Indeed, the authors tend to neglect that each statistical EVT-based method has pros and cons and it is based on a set of assumptions. Concerning the homogenisation, the effects on extremes are far from being well understood and modelled. In addition, the avail-

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able methods for detection/correction at the daily scale still need to be better investigated/explored and caution should be taken when applied. Thus, my main comment is to revise the text by presenting what has been done and avoiding over-statements and questionable statistical recommendations not really supported.

Finally, there are too many figures. I think there is no real need of Figures 4, 5, 9 and 11

Some Specific comments - 2249 10-12: I suggest to rephrase. - 2249, 19-22: I do not fully agree with this statement. Besides the choice of the threshold, there are not really additional uncertainties. The seasonality is not an issue since it can be either modelled or avoided by selecting specific time periods. Clustering does not bias the estimation and anyway there are ways to deal with it. - 2252, 23-24: I suggest to rephrase. - 2254, 6-7: Is this approach really suitable for precipitation? - 2258, 22-28: I suggest to better explain what has been done. - 2261, 6-7: I suggest to rephrase. - 2261, 11-12: ditto. - 2263, 9-16: I do not see the need of this paragraph in this context

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