

***Interactive comment on* “Technical note: Space-time analysis of rainfall extremes in Italy: clues from a reconciled dataset” by Andrea Libertino et al.**

Anonymous Referee #2

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This technical note presents a unified database of precipitation extremes over Italy. There is no doubt that such efforts aiming to gather, “clean up” and finally provide all the available information in “one place” are very useful for hydrological design. Of course in this specific case these efforts are undermined by the fact that the final database is not actually freely available. In the open-access era this is a serious drawback which however, if I understood correctly, it is not authors’ fault but a restriction for the Italian authorities. There are a few minor comments and suggestions that I would like to make hoping to be helpful in improving this technical note. 1. Figure 2: There is not any official abbreviation of years as “Y” so probably it would be more clear instead of t(Y) to write just “Years”. Panels b and c: please decrease the size of fonts in the

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X-axis so it can be read more easily and also change the label to “Length (years)” or something similar as no.years is confusing (also check the panel d: do you mean years or data?). This suggestion is for any other Figure, e.g., for Figure 5 where “t(Y)” is used. 2. Analysis presented in Figure 4. There is a dense network, more than sufficient to provide kriging estimates for the whole Italy. It would much more useful in my opinion not only because dots may overlap but because you will provide estimates also in places where there is no information. So, I would suggest to construct kriging maps of the statistics analyzed. 3. Mean is quite robust in general, yet here you prefer only the median. Of course it can be affected by outliers yet common methods of fitting distributions, e.g., product moments or L-moments are using mean values. So, in my opinion you should provide also the maps of the mean value. 4. If I understood well you have estimated the mean values of L-CV, L-skew and L-kurt of all duration. Of course you are dealing with maxima and we are expecting the shape characteristics to be close yet this is not necessarily true. If indeed these summary statistics are close among the different duration, please report it or else provide different maps for each duration. 5. It is not clear to me if the maxima values have emerged from a sliding-window process or from a fixed-block (non-overlapping). In the latter case the user of this database should know this fact in order to correct the data by the Hershfield factor. Please comment on that and clarify. 6. You can use plain text for L-CV. In Figure 4 is plain while in the text you are using Italics. Please re-check the text for minor typos, e.g., line 26, p6 replace “an unique” with “a unique”.

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