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Interactive comment on "Hydrometeorological analysis and forecasting of a 3-day flash-flood-triggering desert rainstorm" *by* Yair Rinat et al.

Yair Rinat et al.

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We thank Reviewer #1 for the useful comments that helped us improve the manuscript. We addressed all comments in a revised manuscript we have prepared. The reviewer's comments are reported followed by our answers.

- The paper lacks a discussion section that could be useful to better highlight the interest of the present study as compared to the existing literature. Authors' answer: Discussion section was added as suggested. It includes the lines of discussion that were previously distributed in the individual sections as well as some additional lines.

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Discussion paper

C1

Specific comments: - 1/ Line 122: the paper refers to Table 1, but this table does not seem to be related to the sentence Authors' answer: Thank you the reference was removed, consequently, the places of Table 1 and Table 2 were swapped

- 2/ Line 143-145: The authors could mention the general methodology for post event survey proposed by Gaume and Borga (2008). Authors' answer: Thank you, the reference was added

- 3/ Lines 190-194: the use of the bootstrap method is not clear: on which variable is the bootstrapping performed? Authors' answer: The sentence has been updated to: "Uncertainty related to the available data record was quantified via bootstrap with replacement (250 repetitions) among the years in the record"

- 4/ Line 224: the authors mention that the video provided by the witnesses gives information on the spatial and temporal variability. I would say that it only gives information on the temporal variability as the witnesses are located at only one point. Authors' answer: Thank you, it was corrected

- 5/Line 262 The model resolution is : Authors' answer: Sentence was changed from: "The model resolution is of ~2.5 km2" to: The model spatial resolution is of ~2.5 km.

- 6/ Lines 273-274 and lines 320-321. The authors should refer to the work of Vincendon et al. (2011) that already proposed a method to move the location of intense cells from deterministic meteorological forecast. The method of Vincendon et al. (2011) is very close to the method proposed in the present paper. Authors' answer: Thanks, it was added to the new discussion: "Vincendon et al., (2011) developed a simplified method to produce rainfall ensemble from single-value meteorological forecasts and showed that by using it as an input to a hydrological model the gained flood-forecasting ensemble performs better than the deterministic result."

- 7/ Table 1: The content of this table is not clear: does it include the estimated peak discharge from the post event survey? Authors' answer: No, peak discharge data from

post event survey and from hydrometric stations are in Table 2 (now Table 1). Table 1 (now Table 2) includes general sub-basins properties, discharge thresholds that are used to determine flash flood return period category, and the determined flood return period category for April 26th; text was added for clarification.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2020-189, 2020.