

Interactive comment on “Systematic errors analysis of heavy precipitating events prediction using a 30-year hindcast dataset” by Matteo Ponzano et al.

Anonymous Referee #1

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The manuscript analyses the quality of precipitation reforecasts over the Mediterranean region performed with the Arpege model and a 10-member ensemble consisting of different convection parametrization schemes. The statistical data analysis is of very high technical quality. However the manuscript is very long, is sometimes a bit too technical, a large list of results from different well elaborated tools - one would wish to see a bit more physical interpretations in places - and one might possibly also see in addition to the observations some other reference, in particular the ERA5. Therefore I suggested major revisions, but as you will see these are not really major and should be very straightforward to do as it consist of some shortening as specified, a few sentences on physical interpretation and if possible I and likely the community would like to see on

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at least a few plots the results from the ERA5 (at least for forecast step 12 or so) which should shed more light on the quality/interpretation of the Arpege reforecasts (though they are somewhat penalized by initialising with a low-resolution ERA-Interim).

Major comments:

-add on a few plots at least the results with the ERA5 -remove Tables 7-9 or alternatively if you prefer Tables 5-6 -remove Figures 11 and 12 and corresponding text on page 25

Specific comments and wording

-Abstract l4 "flash-flood"->"flash floods" l6 "hindcast"->"hindcasts" -l27 : "a quasi-stationary synoptic system to slow the convective system", odd sentence, the convective systems are not "slowed" by the convective system

-l45 "weather warning triggering"->"triggering of weather warnings" -l86 "forecasts on the basis of the region of the domain ..." ????? rewrite whole sentence -l91 "In detail, section 2.1 .."-> "section 2.1 .." -l95 ", and furtherly based on ..." delete -l126 "In ECUME oceanic fluxes are maximized"? what do you mean by that -l135 "realized"->"provided" -l232 "both in" delete -page 12 caption Figure 4 "the the" delete "the" -l312 "higher lead time ranges"->"longer lead times" -l349 "at first lead times"->"at short lead times" -l356 "while CAPE shows a behaviour different form". Can you explain why and add in the text? Also CAPE looks actually good for LT34 compared to other runs -l375 "standardized"-"normalized" -l503 "flat and large objects"->"flat and larger" -l504-5 please rewrite this sentence -l506 "negative-skewed"->"negatively-skewed" -l508 " .. component behaviour .. to the clusters" rewrite this sentence -l520-524 delete as with material Figures 11,12 -l525 "On another hand"->"Furthermore," -l515 "ranges higher"->"ranges longer"

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