

We would like to thank you for your review. Please find below our answers to your comments. The manuscript was updated accordingly.

### **General comments**

The reviewed manuscript aims at investigating how rainfall extremes (more generally variability across scales) vary with temperature utilizing the scale invariant framework of the Universal Multifractals. This topic is of interest to a wide audience of hydrometeorologists. The Authors use rainfall and temperature data from three high resolution measurement campaigns that were conducted in France covering the period from 2018 to 2025. Their findings suggest that: a) scaling behavior is confirmed on two distinct ranges of temporal scales (event scale and synoptic scale) and b) the invariant maximum observable singularity is increasing on average with respect to temperature. The manuscript is well structured and clearly organized, so no changes are suggested.

Thank you for your positive comments !

### **Specific comments**

Identification of potential trends of UM parameters with respect to temperature  $T$  is conducted by applying linear regression (see Lines 199 – 201 and 226 – 228 and also Figures 5 and 7). In all cases considered, significant scattering is observed, associated with low values of the coefficient of determination. It is my opinion that it would be helpful if a statistical test was applied to quantify the level of significance of rejection of the null hypothesis of no trend.

Following your suggestion, a statistical test was applied ( $p\text{-value} < 0.05$ ) was used to reject the null hypothesis of no trends. This is now clarified in the text. In addition, a new analysis based on samples based on bins of temperature was carried out and presented.

### **Technical corrections**

Line 13 and other places where few references are cited: Add more references or use “see e.g.”

This was done, thank you for your careful reading.

Line 15: Periods after the word erosion should be replaced by etc.

This was done, thank you for your careful reading.

Line 39: Replace “greater” by “more pronounced”

This was done, thank you for your careful reading.

Line 55: Remove “they”

This was done, thank you for your careful reading.

In Figure 2 replace “temporal evolution” with “time series”

This was done, thank you for your careful reading.