First of all, I'd like to commend the authors for this very nice paper.

Thank you

But there is one piece of information that is not clear to me, regarding the significance of the trends. The methods (3.1) explain two kinds of tests : (1) one test quantifies the significance of local trends at each station (I guess it's the MK test itself, which tells if the series is monotic, i.e. if a significant trend exists, while the method of Sen quantifies the trend) ; (2) another test, based on false discovery rates, is used to assess if the trends are significant regionally.

Yes, we first performed a "classical" trend analysis for each basin with the MK test. Then, we checked if the detected trends are field (or regionally) significant in a statistical sense.

One question regarding the regional test: what is the corresponding spatial scale? Are all stations lumped together, or is the regional scale more "local", distinguishing for instance Languedoc from Provence?

Yes all stations are lumped together. The reason why we implemented a False Discovery Rate (FDR) approach is no to provide a spatial analysis of trends for sub-regions, but to check if the multiple repetition of trend tests on different basins and variables is not introducing statistical artifacts. Basically, if you repeat a statistical test enough times, you are going to find an effect (rejection of the null hypothesis) but that effect may not actually exist.

For an excellent discussion of this aspect and about the need to implement such approaches (it is in the reference list):

Wilks, D.S.: The stippling shows statistically significant grid points: how research results are routinely overstated and over interpreted, and what to do about it, Bull. Am. Meteorol. Soc., 97, 2263–2273, 2016.

Besides, the articulation between these two tests and the produced figures is not clear to me. Let's take Figure 2 for instance (but the same applies to Figs 3, 4, 6): the caption does not tell if the plotted trend symbols (red and blue triangles) correspond to significant trends or not, and under which of the above tests (local, regional, or both).The text considers that the trends are significant, but provides no additional elements in this regard.

We modified the figure captions in the revised manuscript to clearly state that all the trends displayed on the plots are those significant at the 10% significance level. In addition, we provided a new table to summarize for each variable, the number of basins with significant positive trends, significant negative trends and if the detected trend signal is regionally significant.

Looking more carefully at Figure 2, there is not the same number of triangles depending on the variables: is it the result of significance screening? or because there is not the same number of stations. I guess it's the first solution, but some clarifications would enhance the paper.

Yes it is the first solution; significant trends for each variable are reported on these plots. This is consistent throughout the manuscript, only significant trends for each variable are reported.

Finally, I wonder if the figures with triangles to represent positive and negative trends (Figs 2,3,4,6) could not be augmented by making the size of the triangles proportional to the trend values based on Sen's slope.

As requested by the other reviewers, we added in the revised manuscript this information on the plots, by making the size of the triangles proportional to the trend magnitude.