Atmos. Chem. Phys. Discuss.,
https://doi.org/10.5194/acp-2019-109-RC2, 2019

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Recent trends in climate variability at the local scale using 40 years of observations: the case of the Paris region of France" *by* J. Ringard et al.

Anonymous Referee #3

Received and published: 12 July 2019

The authors examine the variability of temperature, moisture, and precipitation of local scales at different time scales using local observations during 1979 to 2017, and they try to determine the contributions of thermodynamic and dynamical processes to the observed extremes. Although it is a good topic, which is worth publication in ACP, I have a few comments and concerns about the manuscript. I recommend publication after the concerns and comments are successfully addressed.

Major comments: 1) Since the temperature and moisture are co-dependent and they vary together. it seems to me that it is not correct enough to discuss them separately. Therefore, the authors may not discuss the thermodynamic contributions using the

correct definition. 2) The methodology section is so lengthy that bury the effective information. I would like to suggest to rewritten this section to make your key method more clear.

Minor comments: 1. The classification of four seasons appear twice in the manuscript, one is around Page 3, Line 23, the other one is around Page 9, Line 43. 2. Given the uncertainty of your calculated Kendall Tau, the differences among these τs may not significantly. Could you please provide the CI of your calculated Kendall Tau? 3. The short citation in the text is not in good format. There should be parentheses covering the year. For instance, Donat et al., 2013 (Page 2, Line 1) should be Donat et al. (2013). 4. Page 5, Line 19, "with d ĐĎ [1 à 365]" could be a symbol issue. 5. For those tables, horizontal lines should normally only appear above and below the table. 6. Figure 11: please add the meaning of each horizontal lines into the figure caption.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2019-109, 2019.