Review of « Long-term trends in aerosol properties derived from AERONET measurements" by Zhang et al.

I thank the authors for the very clear answers to my comments as well as for the changes through the manuscript. Particularly, the clear description of sources of the data, the uncertainties in Sect. 2.2 as well as the modifications of the figures largely improves the paper. There is still some necessary improvement regarding the trend methodology:

Methodology for trend analysis:

- The authors now correctly described the MK test for the significance. They also wrote a very complete answer to my comments, but with few changes in the manuscript. First, there is no mention of the potential error due to the autocorrelation. The authors wrote in their answer that they are now using yearly medians, which is not described in Sect 2.3. In order not to use prewhitening methods, the absence of ss autorocorrelation has to be proven, since yearly data can still be autocorrelated.
- It is clear that a lot of time series do not pass the homogeneity test. The confidence level for homogeneity can then be decreases. The results for each season is however given, even if the homogeneity test is not passed. Finally, the annual trend can be easily computed since it corresponds to the median of the seasonal slopes. I still find that the use of a prewhitening method with daily or monthly data should be preferred. You could then represent the yearly trend with some different symbols is the seasonal trends are not homogeneous and give an explanation about the consequence of inhomogeneity between the seasons.
- To further weight the previous comment, Fig. 5, 7, 11 and 13 (former Fig. 4 and 6) is much less convincing and provides less information than in the previous version.
- I thank the authors to have modified the seasonal pattern, that is presently only described in the caption of Fig. 8. I think that it could be worth to add some global description in Sect 2.
- Homogeneity in the time series: I thank the authors for their answer to my comments, where they explain how they check and improve the homogeneity in the time series. A complete answer with a description on how they handle the mentioned potential problems at some stations (I mention 27 stations and they give information on 8 stations) is however missing. I do not have time to verify their work by opening the numerous files of the supplement, so that I trust them to have accomplish this fastidious work. Anyhow, it is necessary to better describe this quality control and the applied rules in Sect. 2. For exemple at line 94, the way outliers are estimated should be reported