Reviewer#1

I am not competent for the climate issue. My opinion only concerns issues related to methods.

The work has the great interest to show that the two methods used give compatible results, which his a way to validate both methods.

It is important to have two compatible schemes to ensure robust results. The search for such schemes will undoubtedly continue. Other variants are possible. I think we should probably prefer those based on AP who has a local ability to see what happens. Those based on KC and its variants do not really seem likely to give better and are more likely to produce artifacts.

A new area of research comes from this type of application. The work has a practical interest. It also has a theoretical interest since it validates distant propositions of complexity measures which are theoretically linked, which the results confirm.

Line 98

"However, the binarization process is still needed even for short solar radiation time series."  

No it is no true. The use of the coding theorem do not necessitate binarization.

The following paper give some examples of the use of the coding theorem with non binary sequence:


Answer:

Thank you the reviewer for the comments. We agree with the reviewer that the coding theorem do not need the binarization of the data. We removed this sentence in the text.

Line 569

"It is pointed out that AP method needs binarizing the hourly time series which is done using the mean in the threshold method."

Idem

Answer:

Thank you the reviewer for the comments. We agree with the reviewer that the coding theorem do not need the binarization of the data. We have changed the sentences in order to take in account this aspect.

«The coding theorem (CT) and the method to compute the complexity with AP method are also presented. Even if it is not necessary with the AP method, we have binarized the hourly time series by using the mean in the threshold method. Firstly, the results obtained with AP method show its ability to catch the variability and complexity of hourly solar radiation over the western part of the Indian Ocean.»