

## Interactive comment on "Chaotic Signatures and Global Solar Radiation model estimate over Nigeria, a Tropical region" by Adedayo Adelakuna and Folasade Adelakun

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Short Response on RC1: The manuscript investigates the use of a reconstruction model for daily solar global radiation based on temperature and relative humidity over 4 locations in Nigeria. The topic of the manuscript is of great interests given the possible applications of such a model in the region. The merit of the paper is to study the application of the model through advanced mathematical techniques. The authors appreciate the positive assessment of the paper. Necessary corrections and adjustments to the present form have been done. The main aim of the paper is to determine the variation of chaos in solar radiation data in different climatic conditions of Nigeria

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which has been included. Chaos theory offers an insightful approach to investigating the global solar radiation behavior of time series data without assumptions about the underlying distribution. The form of the paper is now clear with precise information and new findings are clearly stated. Suggested additional information has been taking care of in the paper, while the full explanation of the abbreviations has been included in the manuscript.

Short Response on RC2: The authors also appreciate the positive assessment of the paper. As discussed above, necessary corrections and adjustments to the present form have been effected. The main aim of the paper is to determine the variation of chaos in solar radiation data in different climatic conditions of Nigeria which has been included. Chaos theory offers an insightful approach to investigating the global solar radiation behavior of time series data without assumptions about the underlying distribution. Authors motivations and highlighting the original part of the work have been included in the reviewed version of the paper. Complete revision on the introduction and the body content of the paper has been done.

Interactive comment on Nonlin. Processes Geophys. Discuss., https://doi.org/10.5194/npg-2020-12, 2020.