

Interactive comment on “Dating Hiatuses: A Statistical Model of the Recent Slowdown in Global Warming – and the Next One” by J. Isaac Miller and Kyungsik Nam

Anonymous Referee #1

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This paper focuses on the detection and attribution of the temperature hiatus over the last decade, as a hot issue for the climate change studies. Based on the semi-parametric cointegrating regression approach, the authors give one explanation of the temperature hiatus by considering many physical causes, which is useful for improving the understanding. However, there are two questions I concerned. One is the influence of data quality on the results, and the other is the influence of the temperature hiatus on the whole temperature variability in the future. Some specific comments are given as follows: (1) The volcanoes of course influence the temperature variability, with a contribution of 1% explained by the authors. However, as is known, the results from regressive approaches have big uncertainty, and so the 1% contribution is real or just

bias? (2) The quality and quantity of observations prior to the satellite era are questionable. How much actual observation data is included prior to 1970s in the monthly HadSST3 used in this study? Please provide that information for the credibility of the results, especially for the results in Figure 2. Besides, if the results have biases only using the HadCRU data? as this data set has biases at monthly scales. (3) I cannot understand why using the ENSO to explain the temperature Hiatus at decadal scales, because it mainly exhibits oscillatory variations at interannual scales. Further, the authors also investigate the temperature Hiatus in the future based on the OMO, but not the ENSO. How to coordinate the influence of the OMO and ENSO on the temperature variability? (4) The authors discuss the temperature Hiatus in the future using the Sin extrapolation of OMO. As mentioned above, is there any uncertainty for the practice? Moreover, the contribution of the temperature Hiatus (that is, the oscillatory variations of temperature) to the whole temperature variability (especially more significant increase) in the future should be clarified, as it is more important for the policy-making, as discussed in Conclusions. Besides, the regional difference about the results can be simply discussed.

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Discussion paper

