

## ***Interactive comment on “A combined Terra and Aqua MODIS land surface temperature and meteorological station data product for China from 2003–2017” by Bing Zhao et al.***

### **Anonymous Referee #1**

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This is an excellent work with great significance for regional climate, environment and sustainability studies. The absence of complete and continuous time series LST datasets have challenged thermal studies for centuries. The dataset provided in this study is able to support the spatio-temporal analysis of climate change in China, and also the related sustainability assessment. The structure of the paper is well-organized, and the analysis based on the dataset is also sufficient.

However, the temperature data collected from meteorological stations are actually air temperature (AT), not land surface temperature (LST). The relationship between the two temperature datasets is complicated and still not totally understood over heteroge-

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neous land surfaces. I understand it is impossible to use actual LST collected artificially to reconstruct new datasets or for verification on large scales. Nevertheless, the relationship between AT and LST should still be investigated, and the impact on your results should also be discussed.

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Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2019-155>, 2019.

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