

Interactive comment on “A global long-term (1981–2000) land surface temperature product for NOAA AVHRR” by Jin Ma et al.

Anonymous Referee #1

Received and published: 17 August 2020

This is an interesting manuscript described a processed AVHRR LST dataset that is very useful for long-term study of land surface temperature variation. Specifically, the dataset can be referred as a base for the climatological study of surface temperature since 2000: variation analyses between the LSTs derived from recent/current and the AVHRR LSTs can be a solid evidence of the global climate change. The method described in the manuscript can also be applied for producing long-term LST data record from other satellite missions, such as EOS MODIS and JPSS VIIRS.

The manuscript provides details of the LST algorithms being applied, multiple datasets being used, which are all good for readers to use the data, or to process their own long-term record of LST data.

Improvements suggested:

C1

How the in-situ LST is estimated? Quality control/noise reduction in the process?

Cloud pixel exclusion (how cloud information was provided in the original data?) process?

The final 0.05 deg resolution data – Is this the resolution from the original AVHRR dataset? If not how about the compositing/aggregation process applied?

How the monthly average data set is generated? Details about the compositing/aggregation process?

End

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-143>, 2020.

C2