

Earth Syst. Sci. Data Discuss., community comment CC2
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Comment on **essd-2021-309**

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Community comment on "A dataset of daily near-surface air temperature in China from 1979 to 2018" by Shu Fang et al., Earth Syst. Sci. Data Discuss.,
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This is a very good work. It is currently the most comprehensive set of air temperature datasets with the longest time and the highest spatial resolution of the daily maximum temperature, daily minimum temperature and average temperature in China. We know that in different time periods, the number of meteorological stations is inconsistent, the number of early observation stations is very limited, and the data records are also inconsistent. The authors sorted out and screened the previous data, especially when constructing the daily maximum and minimum temperature models, dynamically considering changes in weather, which overcomes the shortcomings of traditional methods and compensates for missing data where there are no weather stations.

In order to further improve the accuracy, the author divides China into 6 regions according to climate conditions and topography, and builds different models for different regions to make further corrections. This is a great work, and the dataset will bring great convenience and support to related research in China. At present, the data set has been downloaded more than 16,000 times, which shows the urgent need and recognition of many researchers for this data set. Thank you very much for your work.

Please also note the supplement to this comment:

<https://essd.copernicus.org/preprints/essd-2021-309/essd-2021-309-CC2-supplement.pdf>