A Big Earth Data Platform for Three Poles

**1-km monthly maximum temperature dataset for China (1901-2021)**

1、Description

This dataset includes the monthly maximum temperature data with 0.0083333 arc degree (~1km) for China from Jan 1901 to Dec 2021. The data form belongs to NETCDF, namely .nc file. The unit of the data is 0.1 ℃. The dataset was spatially downscaled from CRU TS v4.02 with WorldClim datasets based on Delta downscaling method. The dataset was evaluated by 496 national weather stations across China, and the evaluation indicated that the downscaled dataset is reliable for the investigations related to climate change across China. The dataset covers the main land area of China, including Hong Kong, Macao and Taiwan regions, and excluding islands and reefs in South China Sea. WGS84 is recommended for data coordinate system.

2、Keywords

Theme：Maximum/Minimum temperature,Temperature
Discipline：Atmosphere
Places：China
Time：1901-2021

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：106496.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：55.5587943901263 | - |
| west：72.1960450229045 | - | east：136.196045022846 |
| - | south：16.2504610568287 | - |

5、Time frame:None--None

6、Reference method

References to data:

PENG Shouzhang. 1-km monthly maximum temperature dataset for China (1901-2021). A Big Earth Data Platform for Three Poles, doi:10.5281/zenodo.31141942020

References to articles:

Peng, S.Z., Ding, Y.X., Wen, Z.M., Chen, Y.M., Cao, Y., & Ren, J.Y. (2017). Spatiotemporal change and trend analysis of potential evapotranspiration over the Loess Plateau of China during 2011–2100. Agricultural and Forest Meteorology, 233, 183–194.

Ding, Y.X., & Peng, S.Z. (2020). Spatiotemporal trends and attribution of drought across China from 1901–2100. Sustainability, 12(2), 477.

Peng, S. , Gang, C. , Cao, Y. , & Chen, Y. . (2017). Assessment of climate change trends over the loess plateau in china from 1901 to 2100. International Journal of Climatology.

Peng, S.Z., Ding, Y.X., Liu, W.Z., & Li, Z. (2019). 1 km monthly temperature and precipitation dataset for China from 1901 to 2017. Earth System Science Data, 11, 1931–1946. https://doi.org/10.5194/essd-11-1931-2019

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: PENG Shouzhang
unit:
email: szp@nwafu.edu.cn