A Big Earth Data Platform for Three Poles

**Northern Hemispheric annual near-surface temperature during the past millennium**

1、Description

This is Northern Hemispheric (NH) annual near-surface temperature dataset during the past millennium with a 2° spatial resolution, which is produced using the paleoclimate data assimilation approach with EnSRF method, MPI-ESM-P model and 396 multi-proxies from the PAGES2k Consoritum. This dataset agrees well with several observational temperature datasets during the instrumental period, and has a similar level of reliability as the Twentieth Century Reanalysis which assimilates surface pressure observations. In addition, the dataset shows a high level of agreement with previous proxy-based reconstructions (average correlation of annual mean NH temperatures is r = 0.61). The dataset can be used to study the temperature variability over the NH and some regions of the NH during the past millennium (1000-2000 AD).

2、Keywords

Theme：Paleoclimate data assimilation,Paleoclimate Reconstruction
Discipline：Palaeoenvironment
Places：Northern Hemispheric
Time：The past millennium, Annual resolution

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：127.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：180.0 | - | east：180.0 |
| - | south：0.0 | - |

5、Time frame:0999-12-31 15:54:17+00:00--2000-12-30 16:00:00+00:00

6、Reference method

References to data:

FANG Miao, LI Xin, CHEN Deliang, CHEN Hans . Northern Hemispheric annual near-surface temperature during the past millennium. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2711062021

References to articles:

Fang, M., Li, X., Chen, H. W., & Chen, D. L. (2022). Arctic amplification modulated by Atlantic Multidecadal Oscillation and greenhouse forcing on multidecadal to century scales. Nature Communications, 13, 1865, https://doi.org/10.1038/s41467-022-29523-x.

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

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