A Big Earth Data Platform for Three Poles

**Basic datasets related to heat source on the Tibetan Plateau (1948-2020)**

1、Description

As a powerful heat source, the Tibetan Plateau (TP) affects the onset, advance and retreat of the Asian monsoon, and the interaction between the westerly belt and the monsoon belt. In order to study the variation of TP thermal effect and its influence on the surrounding climate, the basic data related to TP heat source are needed.
This data set is composed of monthly basic heat source data of the TP and its surrounding areas calculated from reanalysis data, and its horizontal range covers 40°E-180° and 20°S-80°N. The spatial resolution is 2.5 ° x2.5 °, and the datasets mainly included ERA5 and NCEP/NCAR reanalysis data.

2、Keywords

Theme：Radiative flux,Radiation,heat source,Atmospheric heating,Other
Discipline：Atmosphere
Places：Qinghai-Tibet Plateau
Time：1948-2020

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：167.11MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：80.0 | - |
| west：40.0 | - | east：180.0 |
| - | south：20.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

LI Qingquan . Basic datasets related to heat source on the Tibetan Plateau (1948-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2728582022

References to articles:

Li, Q.Q., Zhao, M.C., & Yang, S., et al. (2021). A zonally-oriented teleconnection pattern induced by heating of the western Tibetan Plateau in boreal summer. Clim Dyn 57, 2823–2842.

Sun, X.T., Ding, Y.H., & Li, Q.Q. (2021). Interdecadal variation of the atmospheric heat source over the Tibetan Plateau and surrounding Asian monsoon region: Impact on the northern hemisphere summer circulation. J Meteorol Res 35, 238–257.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

name: LI Qingquan
unit: National Climate Center
email: liqq@cma.gov.cn