A Big Earth Data Platform for Three Poles

**Temperature and precipitation dataset in Xinjiang (1961-1990)**

1、Description

The time coverage of this data is (1961-1990). The station data set includes 222 stations of precipitation data and 202 stations of temperature data. In order to fill the meteorological data in the surrounding area of ​​Xinjiang in the study area, this data set uses the Central Asia Temperature and Precipitation Data (1879-2003), and some site data of Pakistan, Afghanistan, Mongolia (Global Historical Climate Network) and CRU dataset, in addition to the Xinjiang Meteorological Data Set, Qinghai, and Gansu Daily Data. There is a large amount of missing data in the used dataset, which will affect the accuracy of the grid data generated by the extrapolation method. Therefore, this article deletes sites with consecutive missing years, and uses sites adjacent to the site to replace missing sites with fewer years (less than 3 years). For sites where the spatial distribution of sites is too sparse, BP neural network is used to fit and reconstruct sites with severely missing data, such as Tazhong (51747), Andi Township (51848), and Hangya (51915). Based on the pre-processed data, the interpolation method of this data set is the Cressman objective analysis method. The monthly average temperature and monthly precipitation are extrapolated to the study area, and the grid period observation data with a horizontal resolution of 0.5 ° is obtained.

This data contains two files: temperature data of xinjiangtemp.nc and precipitation data of xinjiangpre2.nc.

2、Keywords

Theme：Precipitation,Temperature
Discipline：Atmosphere
Places：Xinjiang
Time：2016

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：5.0MB

4.Data format：数字文档

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：52.0 | - |
| west：71.0 | - | east：91.0 |
| - | south：35.0 | - |

5、Time frame:1961-01-07 08:00:00+00:00--1991-01-06 08:00:00+00:00

6、Reference method

References to data:

LI Lanhai, LI Xuemei, Meng Xianyong, BAI Lei, CHEN Xi. Temperature and precipitation dataset in Xinjiang (1961-1990). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2705672016

References to articles:

李兰海, 白磊, 姚亚楠, & 杨青. (2012). 基于ipcc情景下新疆地区未来气候变化的预估. 资源科学, 34(4), 602-612.

7、Supporting project information

8、Data resource provider

name: Meng Xianyong
unit: College of Resources and Environment Sciences, China Agricultural University
email: xymeng@cau.edu.cn

name: BAI Lei
unit:
email: caecar1986@qq.com

name: CHEN Xi
unit:
email: none

name: LI Xuemei
unit:
email: none

name: LI Lanhai
unit:
email: lilh@ms.xjb.ac.cn