A Big Earth Data Platform for Three Poles

**GLDAS based global Arid Index data set (1948-2018)**

1、Description

This data set is the data set of drought index AI from 1948 to 2018, with spatial coverage of 60s-60n, 180e-180w, spatial resolution of 0.5 °, and temporal resolution of year. The potential evapotranspiration (PET) is calculated based on penman Monteith model, in which the wind speed, relative humidity, sensible heat, latent heat, soil heat flux and surface pressure data are from GLDAS, air temperature data are from CPC, and precipitation data are also from CPC. GLDAS data is divided into two sections. The first section is from GLDAS\_ NOAH10\_ M v2.0 series, covering the period from 1948 to 2015; The second paragraph is from GLDAS\_ NOAH10\_ M v2.1, covering the period from 2000 to now, we spliced the overlapping data segments from 2000 to 2014, subtracted the average values of wind speed, relative humidity, sensible heat, latent heat, soil heat flux and surface air pressure of the two sets of data in this period, obtained the difference, and added the difference to the data set of v2.1 to calculate pet.

2、Keywords

Theme：Arid Index,Humidity/Dryness
Discipline：Atmosphere
Places：Global
Time：1948-2018

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：12.3MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：60.0 | - |
| west：-180.0 | - | east：180.0 |
| - | south：-60.0 | - |

5、Time frame:1947-12-31 16:00:00+00:00--2018-12-30 16:00:00+00:00

6、Reference method

References to data:

YU Haipeng. GLDAS based global Arid Index data set (1948-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2718322021

References to articles:

7、Supporting project information

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

8、Data resource provider

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