A Big Earth Data Platform for Three Poles

**Surface meteorological driving dataset of the Qinghai Tibetan Plateau (2019-2020)**

1、Description

1) The Qinghai Tibet plateau surface meteorological driving data set (2019-2020) includes four meteorological elements: land surface temperature, mean total precipitation rate, mean surface downward long wave radiation flux and mean surface downward short wave radiation flux.  
2) The data set is based on era5 reanalysis data, supplemented by MODIS NDVI, MODIS DEM and fy3d mwri DEM data products. The era5 reanalysis data were downscaled by multiple linear regression method, and finally generated by resampling.  
3) All data elements of the Qinghai Tibet plateau surface meteorological driving data set (2019-2020) are stored in TIFF format. The time resolution includes (daily, monthly and annual), and the spatial resolution is unified as 0.1 ° × 0.1°。  
4) This data is convenient for researchers and students who will not use such assimilated data in. NC format. Based on the long-term observation data of field stations of the alpine network and overseas stations in the pan third pole region, a series of data sets of meteorological, hydrological and ecological elements in the pan third pole region are established; Complete the inversion of meteorological elements, lake water quantity and quality, aboveground vegetation biomass, glacier and frozen soil change and other data products through intensive observation in key areas and verification of sample plots and sample points; Based on the Internet of things technology, a multi station networked meteorological, hydrological and ecological data management platform is developed to realize real-time acquisition, remote control and sharing of networked data.

2、Keywords

Theme：Radiation,Temperature,Near surface temperature  
Discipline：Atmosphere  
Places：Tibetan-Plateau  
Time：2019-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：827.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：43.0 | - |
| west：103.0 | - | east：75.0 |
| - | south：27.0 | - |

5、Time frame:2018-12-31 16:00:00+00:00--2020-12-30 16:00:00+00:00

6、Reference method

References to data:

ZHU Liping, DU Baolong. Surface meteorological driving dataset of the Qinghai Tibetan Plateau (2019-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Atmos.tpdc.2718742021

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

name: ZHU Liping  
unit: Institute of Tibetan Plateau Research, CAS  
email: lpzhu@itpcas.ac.cn  
  
name: DU Baolong  
unit:   
email: dubaolong@itpcas.ac.cn