A Big Earth Data Platform for Three Poles

**The active layer moisture monitoring dataset of Qinghai-Tibet Plateau Beiluhe meteorological station (2017.1-2018.10)**

1、Description

The active layer is one of the main characteristics of permafrost. It melts in warm season and freezes in cold season, showing seasonal changes. The amount of water content in the active layer has certain influence on the temperature of the permafrost, thus affecting the stability of the permafrost.The data set is mainly composed of active layer moisture data. The monitoring station is located at 92°E, 34°N, with an elevation of 4600m. The monitoring site is flat, the vegetation type is alpine meadow, and the water probe used by Beilouhe Meteorological Station is CS615. The data set is used to monitor water at 5 depths below the surface, 10 cm, 20 cm, 40 cm, 80 cm and 160cm. The time interval of the data set is 1 day and is 30 minutes.Mean value of data once, data is stable and continuous during monitoring.By combining the data of soil heat flux and frozen soil temperature, the thermal change process and mechanism of active layer can be carried out.

2、Keywords

Theme：Active layer,Frozen Ground  
Discipline：Cryosphere  
Places：Tibetan Plateau, Beibeihe  
Time：2017.1-2018.10

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.05MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.0 | - |
| west：92.0 | - | east：92.0 |
| - | south：35.0 | - |

5、Time frame:2017-01-02 16:00:00+00:00--2018-11-01 16:00:00+00:00

6、Reference method

References to data:

CHEN Ji. The active layer moisture monitoring dataset of Qinghai-Tibet Plateau Beiluhe meteorological station (2017.1-2018.10). A Big Earth Data Platform for Three Poles, doi:10.11888/Geocry.tpdc.2704612018

References to articles:

Chen, J., Zhao, J.Y., Li, K., &Sheng, Y. (2016). Discussion on applying an analytical method to optimize the anti-freeze design parameters for underground water pipelines in seasonally frozen areas. Sciences in Cold and Arid Regions, 8(6), 467–476.

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: CHEN Ji  
unit: Northwest Institute of Eco-Environment and Resources, CAS  
email: chenji@lzb.ac.cn