A Big Earth Data Platform for Three Poles

**Monitoring data of ground temperature, moisture and meteorological elements in the field of freezing thawing landslide and freezing thawing mud flow in Aila mountain (2019-2020)**

1、Description

The data set contains the data set (98 ° 29′16″E, 31 ° Based on hobo temperature, moisture and small meteorological station, the monitoring data of shallow ground temperature, moisture and field meteorological elements of 36 ′ 36 ″ n) freeze-thaw landslide and thaw mud flow are obtained through field monitoring. The observation time is between August 31, 2019 and July 14, 2020. Through on-site monitoring of a complete freeze-thaw cycle, the monitoring data of ground temperature, moisture and meteorological elements automatically obtained by on-site sensors are downloaded. Through certain quality control, the data when the sensors are not fully adapted to the soil environment and the system error caused by sensor failure are eliminated. The observation depth of ground temperature is 10cm, 20cm, 40cm, 60cm, 80cm, 100cm, 150cm and 200cm, with a total of 8 layers. The observation depth of water is 20cm, 50cm, 100cm and 200cm, with a total of 4 layers. Meteorological observation elements mainly include temperature, rainfall, wind speed, wind direction and solar radiation. The observation interval is 30 minutes (Note: the maximum range of solar radiation sensor is 1276.8 w / m2, and the actual solar radiation value is 1276.9 w / m2 when it is greater than the maximum range; The minimum starting wind speed of the wind speed sensor is 0.5m/s. When the actual wind speed is less than the starting wind speed, the display value is 0. Therefore, the data can not reflect the phenomenon of super solar constant and wind speed below 0.5m/s). Quality control includes eliminating the data when the sensor is not fully adapted to the soil environment and the system error caused by sensor failure. The corrected final data is stored in Excel file. The integrity and accuracy of the obtained field data are more than 95% after review by many people. The monitoring data can provide the necessary data support for the research of freeze-thaw landslide and thaw mud flow in Southeast Tibet.

2、Keywords

Theme：Soil,Precipitation,Soil temperature,Soil moisture/Water content,Meteorological element  
Discipline：Atmosphere,Terrestrial Surface  
Places：Jiangda County, Tibet Autonomous Region  
Time：2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：23.9MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.614 | - |
| west：98.486 | - | east：98.488 |
| - | south：31.61 | - |

5、Time frame:None--None

6、Reference method

References to data:

NIU Fujun. Monitoring data of ground temperature, moisture and meteorological elements in the field of freezing thawing landslide and freezing thawing mud flow in Aila mountain (2019-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2712822021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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