A Big Earth Data Platform for Three Poles

**AWS data from typical glacier (2019-2020)**

1、Description

Qiangyong glacier: 90.23 °E, 28.88° N, 4898 m asl. The surface is bedrock. The record contains data of 1.5 m temperature, 1.5 m humidity, 2 m wind speed, 2 m wind orientation, surface temperature, etc. Data from the automated weather station was collected using USB equipment at 19:10 on August 6, 2019, with a recording interval of 10 minutes, and data was downloaded on December 20, 2020. There is no missing data but a problem with the wind speed data after 9:30 on July 14, 2020 (most likely due to damage to the wind vane). Jiagang glacier: 88.69°E, 30.82°N, 5362 m asl. The surface is rubble and weeds. The records include 1.5 meters of temperature, 1.5 meters of humidity, 2 meters of wind speed, 2 meters of wind direction, surface temperature, etc. The initial recording time is 15:00 on August 9, 2019, and the recording interval is 1 minute. The power supply is mainly maintained by batteries and solar panels. The automatic weather station has no internal storage. The data is uploaded to the Hobo website via GPRS every hour and downloaded regularly. At 23:34 on January 5, 2020, the 1.5 meter temperature and humidity sensor was abnormal, and the temperature and humidity data were lost. The data acquisition instrument will be retrieved on December 19, 2020 and downloaded to 19:43 on June 23, 2020 and 3:36 on September 25, 2020. Then the temperature and humidity sensors were replaced, and the observations resumed at 12:27 on December 21. The current data consists of three segments (2019.8.9-2020.6.30; 2020.6.23-2020.9.25; 2020.12.19-2020.12.29), Some data are missing after inspection. Some data are duplicated in time due to recording battery voltage, which needs to be checked. The meteorological observation data at the front end of Jiagang mountain glacier are collected by the automatic weather station Hobo rx3004-00-01 of onset company. The model of temperature and humidity probe is s-thb-m002, the model of wind speed and direction sensor is s-wset-b, and the model of ground temperature sensor is s-tmb-m006. The meteorological observation data at the front end of Jianyong glacier are collected by the US onset Hobo u21-usb automatic weather station. The temperature and humidity probe model is s-thb-m002, the wind speed and direction sensor model is s-wset-b, and the ground temperature sensor model is s-tmb-m006.

2、Keywords

Theme：Maximum/Minimum temperature,Precipitation,Temperature,Winds,Glaciers,Glacier temperature,Glacier(Ice Sheet),Meteorological element,wind speed
Discipline：Atmosphere,Cryosphere
Places：Jiagang glacier, Qiangyong Glacier
Time：2019-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：38.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：30.82 | - |
| west：88.69 | - | east：90.63 |
| - | south：28.88 | - |

5、Time frame:2019-08-05 16:00:00+00:00--2020-12-28 16:00:00+00:00

6、Reference method

References to data:

ZHANG Dongqi. AWS data from typical glacier (2019-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2712342021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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