A Big Earth Data Platform for Three Poles

**Yulong snow mountain glacier No.1 mass balance data (2008-2017)**

1、Description

1.The data content: Yulong snow mountain glacier No.1, mass balance data in 2008-2017 years.
2.Data sources and processing methods: Flower poles are arranged at intervals of 100m in the altitude between 4600m and 4800m in baishui glacier 1, Yulong snow mountain.The ablation was observed at the beginning of may and at the end of August every year.The continuous observation interval is 7 days, in case of the fog, rain, snow and other special circumstances, not visible, will delay the observation time. Mass balance is glacier surface algebra and the amount of accumulation and ablation, reflects the dueling glacier surface per unit area on the end of a material balance, material balance of the average ice changes in status. According to the field observation data, the flower stem observation was a single point of material balance: bn = bs + bi + bsi, bn, bi, bs, bsi, representing a single point of material balance, glacial ice, snow and additional ice equilibrium value and the calculated results indicated on large scale ice figure and topographic map, draw the scope contour for 50 m spacing ablation, accumulated value.In addition, the 4700 m observation point was calculated, monthly flower stem and accumulation of snow melting pit water equivalent. Respectively of accumulation and ablation area between every two adjacent contours, and then calculate the glaciers are melting area gradually glacier melting pure accumulation of C and pure quantity and material balance value B. By using the spatial interpolation method, Arcgis software product contour map, glacier mass balance calculation was realized. The glaciers annual net mass balanceB is 𝐵=Σ𝑏𝑖（𝑠𝑖/S𝑛i）, si for two adjacent contour projection area;Bi for si average net balance;N is the total number of si;S for the total area of the glacier.
3.Data quality description: Flowers rod with a tape measure different positions in the observation of exposed height value, and the height of the rod, the additional section thickness of ice, snow and dirt layer depth, etc. The unit is mm water equivalent w.e. (mm), observed mainly in the melting period. During the period of observation, some flower rod dumping or covered by snow, unable to obtain valid data.
4.Data application results and prospects: The data can provide parameter calibration and verification for the study of glacier dynamics model and simulation.

2、Keywords

Theme：Mass balance,Glacier(Ice Sheet)
Discipline：Cryosphere
Places：Tibetan Plateau, Yulong snow mountain
Time：2008-2017

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.02MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：27.1 | - |
| west：100.2 | - | east：100.2 |
| - | south：27.1 | - |

5、Time frame:2014-01-09 08:00:00+00:00--2018-12-29 08:00:00+00:00

6、Reference method

References to data:

WANG Shijin. Yulong snow mountain glacier No.1 mass balance data (2008-2017). A Big Earth Data Platform for Three Poles, doi:10.11888/Glacio.tpdc.2702742019

References to articles:

Wang, S.J., Du, J.K., &He, Y.Q. (2014). Spatial-temporal characteristics of a temperate-glacier's active-layer temperature and its responses to climate change: a case study of Baishui Glacier No.1 (BSG1), southeastern Tibetan plateau. Journal of Earth Science, 25(4), 727-734.

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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