A Big Earth Data Platform for Three Poles

**Time series DEM of glacier surface in the source area of the Yangtze River and Selin Co region (1976-2017)**

1、Description

Geladandong region is an important and typical source region of great rivers and lakes in the Qinghai Tibet Plateau. This data set provides DEM covering glaciers in the source region of the Yangtze River and Selin Co with different time scales and resolutions to calculate the seasonal and decadal changes of glacier surface elevation in the source region. This data set includes seven 5-meter resolution TanDEM-X data from July 2016 to 2017, which can be used to calculate the seasonal change of glacier surface elevation; it includes one KH-9 DEM with a resolution of 30m in 1976, five TanDEM-X with a resolution of 30m in 2011, one TanDEM-X in 2014 and three TanDEM-X in 2017 with a resolution of 30m. The data can be used to calculate the change of glacier surface elevation during 1976-2000, 2000-20112011-2017. At the same time, Landsat ETM data are used to extract the glacier outline in 1976and we divide it according to the RGI6.0; The right figure shows the spatial and temporal coverage information of the data set, and the base figure is the orthophoto corrected kh-9 image.

2、Keywords

Theme：Glacier(Ice Sheet),Surface elevation time series  
Discipline：Cryosphere  
Places：Selin Co, Geladandong, source regions of Yangtze River  
Time：season, decade

3、Data details

1.Scale：None

2.Projection：UTM

3.Filesize：1279.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：34.0 | - |
| west：90.5 | - | east：92.0 |
| - | south：33.0 | - |

5、Time frame:1976-12-11 16:00:00+00:00--2017-12-16 16:00:00+00:00

6、Reference method

References to data:

CHEN Wenfeng. Time series DEM of glacier surface in the source area of the Yangtze River and Selin Co region (1976-2017). A Big Earth Data Platform for Three Poles, doi:10.11888/Glacio.tpdc.2716662021

References to articles:

Chen, W., Yao, T., Zhang, G., Li, S., & Zheng, G. (2021). Accelerated glacier mass loss in the largest river and lake source regions of the Tibetan Plateau and its links with local water balance over 1976–2017. Journal of Glaciology 1–15. https://doi.org/10.1017/jog.2021.9.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program  
the Strategic Priority Research Program of the Chinese Academy of Sciences  
Natural Science Foundation of China

8、Data resource provider

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