A Big Earth Data Platform for Three Poles

**Glacier elevation change in the Southeastern Tibetan Plateau since the year 2000**

1、Description

1) Data content: Glacier elevation change in the Southeastern Tibetan Plateau in the past two decades, including time series during 2000 and 2020 and glacier elevation change from 2000 to 2019 at 0.5° grid scale.
2) Data sources and processing methods: Time series during 2000 and 2020 were generated from glacier monitoring methods integrating satellite altimetry (ICESat, CryOSat-2, ICESAT-2), topographic data (DEM derived from ASTER L1A images in 2014), and satellite gravity (GRACE and GLDAS). The grid-scale glacier elevation changes were calculated by ICESAT-2 and NASADEM.
3) Description of data quality: This data is consistent with UAV derived DSM results, GPS observations, and reported results. The temporal resolution and spatial resolution of this data have been significantly improved.
4) Data application results and prospects: This data can be used to calibrate glacial / hydrological model. The data can also be compared with future studies.

2、Keywords

Theme：Glacier elevation change,Glacier(Ice Sheet),Surface elevation time series
Discipline：Cryosphere
Places：Southeastern Tibetan Plateau
Time：Nearly 20 years,

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：0.01MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.57 | - |
| west：91.76 | - | east：98.88 |
| - | south：27.81 | - |

5、Time frame:None--None

6、Reference method

References to data:

LI Xingdong, ZHAO Fanyu, HAN Pengfei, LONG Di, HUANG Qi. Glacier elevation change in the Southeastern Tibetan Plateau since the year 2000. A Big Earth Data Platform for Three Poles, doi:10.1016/j.rse.2021.1128532022

References to articles:

Zhao, F., Long, D., Li, X., Huang, Q., & Han, P. (2022). Rapid glacier mass loss in the Southeastern Tibetan Plateau since the year 2000 from satellite observations. Remote Sensing of Environment, 270

7、Supporting project information

the Second Tibetan Plateau Scientific Expedition and Research (STEP) program
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8、Data resource provider

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