A Big Earth Data Platform for Three Poles

**Dataset of Glacier Elevation Changes in High Mountain Asia (2018-2020)**

1、Description

This dataset includes the glacier elevation change data in the High Mountain Asia (HMA) region from 2018 to 2020 derived from Ice, Cloud and land Elevation Satellite (ICESat-2) data. The glacial elevation changes in the High Mountain Asia region were calculated using ICESat-2 data (2018-2020) and SRTM DEM data in 2000, taking into account the inhomogeneity of glacier changes and area distribution at different elevations and slopes (weighted average of glacier area of elevation and slope bins in 1°×1° grid ). The dataset can provide the annual change information of glacier elevation in the High Mountain Asia region from 2018 to 2020 relative to 2000. These data can be used for studies of climate change in the High Mountain Asia.

2、Keywords

Theme：ICESat-2,Glacier remote sensing,Glacier(Ice Sheet),Glacier elevation change
Discipline：Cryosphere
Places：High Mountain Asia
Time：2018-2020

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.012MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：46.0 | - |
| west：68.0 | - | east：104.0 |
| - | south：27.0 | - |

5、Time frame:2017-12-31 16:00:00+00:00--2020-01-01 03:59:59+00:00

6、Reference method

References to data:

JIA Li , SHEN Cong . Dataset of Glacier Elevation Changes in High Mountain Asia (2018-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2724582022

References to articles:

Shen C., Jia L., Ren S. (2022). Inter- and Intra-Annual Glacier Elevation Change in High Mountain Asia Region Based on ICESat-1&2 Data Using Elevation-Aspect Bin Analysis Method. Remote Sensing, 14, 1630. https://doi.org/10.3390/rs14071630.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition and Research Program (STEP)
The Strategic Priority Research Program of the Chinese Academy of Sciences
Second Tibetan Plateau Scientific Expedition and Research Program

8、Data resource provider

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