A Big Earth Data Platform for Three Poles

**A daily, 0.01° Snow water equivalent dataset for Tibetan Plateau (2000-2018)**

1、Description

Funded by the National Key R&D Program "Observation and Inversion of Key Parameters of Cryosphere and Polar Environmental Changes", "Multi-scale Observation and Data Product Development of Key Cryosphere Parameters", Changes and impacts of glaciers, snow cover and permafrost and how to deal with them (Grant NO.2019QZKK0201), and Pan-tertiary environmental change and the construction of green silk road (Grant NO.XDA20000000), the research group of Zhang Yinsheng, Institute of Qinghai-Tibet Plateau, Chinese Academy of Sciences developed downscaled snow water equivalent products in the Qinghai-Tibet Plateau. The sub-pixel space-time decomposition algorithm was used to downscale the 0.05° daily snow depth data set (2000-2018) over the Qinghai-Tibet Plateau. And the snow depth depletion model was used to supplement the estimation of the snow depth value in the shallow snow area that cannot be detected by passive microwave remote sensing. Finally, based on the snow density grid data, the snow depth data is converted into snow water equivalent data.

2、Keywords

Theme：Surface Freeze-thaw Cycle/state Remote Sensing
Discipline：Remote Sensing Technology,Cryosphere
Places：Tibetan Plateau
Time：2000-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：140000.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.85 | - |
| west：68.0 | - | east：104.7 |
| - | south：25.8 | - |

5、Time frame:2000-08-31 16:00:00+00:00--2018-08-31 16:00:00+00:00

6、Reference method

References to data:

YAN Dajiang, ZHANG Yinsheng. A daily, 0.01° Snow water equivalent dataset for Tibetan Plateau (2000-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2722892022

References to articles:

闫大江. (2022). 青藏高原地区遥感积雪深度降尺度研究. 中国科学院大学.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

Changes and impacts of glaciers, snow cover and permafrost and how to deal with them

8、Data resource provider

name: YAN Dajiang
unit:
email: yandajiang@itpcas.ac.cn

name: ZHANG Yinsheng
unit:
email: yszhang@itpcas.ac.cn