A Big Earth Data Platform for Three Poles

**Annual albedo data set of glaciers in the High Mountain Asia (2000-2020)**

1、Description

Glacier surface albedo is a key parameter in the process of glacier mass and energy balance. The data include annual mean glacier surface albedo and annual minimum glacier surface albedo for each year of the 2000-2020 ablation period (June-August) in the High Mountain Asia. Based on the MODIS 500m resolution daily snow albedo products (including MOD10A1 and MYD10A1), firstly, mean-synthesis was applied to the morning star data MOD10A1 and afternoon star data MYD10A1, followed by interpolation and null-filling using mean-filtering for data within a ±2 day window, and finally based on the minimum and mean methods to obtain the annual mean albedo and annual minimum albedo for glaciers in High Mountain Asia were obtained based on the minimum and mean methods. Compared to the original data, the accuracy and coverage of the data are greatly improved. It can provide ice surface albedo input data for studying the relationship between glacier albedo and matss balance and for glacier models.

2、Keywords

Theme：Glacier(Ice Sheet)
Discipline：Terrestrial Surface,Remote Sensing Technology,Cryosphere
Places：High Mountain Asia
Time：2000-2020

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：20.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：47.0 | - |
| west：65.0 | - | east：105.0 |
| - | south：26.0 | - |

5、Time frame:1999-12-31 16:00:00+00:00--2021-12-30 16:00:00+00:00

6、Reference method

References to data:

XIAO Yao . Annual albedo data set of glaciers in the High Mountain Asia (2000-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2727512022

References to articles:

Xiao, Y., Ke, C.Q., Fan, Y.B., Shen,X.Y., & Cai, Y. (2022). Estimating glacier mass balance in High Mountain Asia based on MODIS retrieved surface albedo from 2000 to 2020, International Journal of Climatology, 2022, https://doi.org/10.1002/joc.7873.

7、Supporting project information

8、Data resource provider

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