A Big Earth Data Platform for Three Poles

**Time series data of snow area ratio in the Arctic (2000-2019)**

1、Description

The fraction snow cover (FSC) is the ratio of the snow cover area SCA to the pixel space. The data set covers the Arctic region (35 ° to 90 ° north latitude). Using Google Earth engine platform, the initial data is the global surface reflectance product with a resolution of 1000m with mod09ga, and the data preparation time is from February 24, 2000 to November 18, 2019. The methods are as follows: in the training sample area, the reference data set of FSC is prepared by using Landsat 8 surface reflectance data and snomap algorithm, and the data set is taken as the true value of FSC in the training sample area, so as to establish the linear regression model between FSC in the training sample area and NDSI based on MODIS surface reflectance products. Using this model, MODIS global surface reflectance product is used as input to prepare snow area ratio time series data in the Arctic region. The data set can provide quantitative information of snow distribution for regional climate simulation and hydrological model.

2、Keywords

Theme：Snow area,Galactic System,Snow,Water Resources,Snow cover  
Discipline：Solar-Terrestrial Physics and Astronomy,Human-nature Relationship,Cryosphere  
Places：North latitude 35 ° to 90 °  
Time：2000-2019

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：791552.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：-180.0 | - | east：180.0 |
| - | south：35.0 | - |

5、Time frame:2000-03-06 16:00:00+00:00--2019-11-29 16:00:00+00:00

6、Reference method

References to data:

MA Yuan, LI Hongyi. Time series data of snow area ratio in the Arctic (2000-2019). A Big Earth Data Platform for Three Poles, doi:10.11888/Snow.tpdc.2703302019

References to articles:

7、Supporting project information

CASEarth:Big Earth Data for Three Poles（grant No. XDA19070000）

8、Data resource provider

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