A Big Earth Data Platform for Three Poles

**Moderate resolution MODIS river lake ice cover dataset in high latitude region of northern hemisphere (2002-2018)**

1、Description

The medium-resolution MODIS river and lake ice phenology data set in the high latitudes of the northern hemisphere from 2002 to 2019 is based on the Normalized Difference Snow Index (NDSI) data of the Moderate Resolution Imaging Spectroradiometer(MODIS). Daily lake iceextent and coverage under clear-sky conditions was examined byemploying the conventional SNOWMAP algorithm, and thoseunder cloud cover conditions were re-determined using the temporal and spatial continuity of lake surface conditions througha series of steps.The lake ice phenology information obtained in this dataset was highly consistent with that from passive microwave data at an average correlation coefficient of 0.91 and an RMSE value varying from 0.07 to 0.13.

2、Keywords

Theme：Lake ice
Discipline：Cryosphere
Places：Eurasia
Time：2002-2018

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：64194.56MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：70.0 | - |
| west：180.0 | - | east：40.0 |
| - | south：31.0 | - |

5、Time frame:2002-07-18 00:00:00+00:00--2018-07-11 00:00:00+00:00

6、Reference method

References to data:

QIU Yubao. Moderate resolution MODIS river lake ice cover dataset in high latitude region of northern hemisphere (2002-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Glacio.tpdc.2708682020

References to articles:

Qiu, Y.B., Xie, P.F., Leppäranta, M., Wang, X.X., Lemmetyinen, J., Lin, H. & Shi, L.J. (2019). MODIS-based Daily Lake Ice Extent and Coverage dataset for Tibetan Plateau, Big Earth Data, 3:2, 170-185.

7、Supporting project information

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

8、Data resource provider

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