A Big Earth Data Platform for Three Poles

**Datasets of Key Variables of Historical Water Cycle in Two Large River Basins in the Arctic (1998-2017)**

1、Description

This product provides the data set of key variables of the water cycle of Arctic rivers (North America：Mackenzie, Eurasia：Lena) from 1998 to 2017, including 7 variables: precipitation, evapotranspiration, surface runoff, underground runoff, glacier runoff, snow water equivalent and three-layer soil humidity, which are numerically simulated by the land surface model vic-cas developed by the project team. The spatial resolution of the data set is 50km and the temporal resolution is month. This data set can be used to analyze the change of water balance in the Arctic River Basin under climate change, and can also be used to compare and verify remote sensing data products and the simulations of other models.

2、Keywords

Theme：Surface Water,Snow,Glacier melt,Discharge/Flow,Hydrology,Glacier(Ice Sheet),Soil Moisture,Snow water equivalent  
Discipline：Terrestrial Surface,Cryosphere  
Places：Arctic  
Time：1998-2017

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：43.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：73.0 | - |
| west：-140.0 | - | east：142.0 |
| - | south：44.5 | - |

5、Time frame:1997-12-31 16:00:00+00:00--2018-12-30 16:00:00+00:00

6、Reference method

References to data:

ZHAO Qiudong, WU Yuwei, WANG Ninglian. Datasets of Key Variables of Historical Water Cycle in Two Large River Basins in the Arctic (1998-2017). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727312022

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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