A Big Earth Data Platform for Three Poles

**2018-2065 estimation data set of key elements of future water cycle in Arctic main river regions with 10 km resolution**

1、Description

This product provides the monthly runoff, evapotranspiration and soil water of major Arctic river basins in 2018-2065 based on the land surface model Vic. The spatial accuracy is 10km. Major Arctic river basins include Lena, Yenisey, ob, Kolyma, Yukon and Mackenzie basins. According to the rcp2.6 (low emission intensity) and rcp8.5 (high emission intensity) scenario results provided by the ipsl-cm5a-lr model in cmip5 in the fifth assessment report of IPCC, the future climate scenario driving data applicable to the Arctic region of 0.1 ° is obtained through statistical downscaling. Using the calibrated land surface hydrological model Vic on a global scale, based on the future climate scenario driven data of 0.1 °, the monthly time series of runoff, soil water and evapotranspiration of the Arctic River Basin in the middle of this century under future climate change are estimated.

2、Keywords

Theme：Others,Evaporation,Runoff,Land Surface Parameter,Drainage Basin and River System,Hydrology,Soil Moisture,main channel and tributary
Discipline：Terrestrial Surface,Cryosphere
Places：Arctic river
Time：Monthly, 2018-2065

3、Data details

1.Scale：None

2.Projection：

3.Filesize：17101.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：76.5 | - |
| west：180.0 | - | east：180.0 |
| - | south：43.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

WU Yuwei, WANG Ninglian, TANG Qiuhong , TANG Yin . 2018-2065 estimation data set of key elements of future water cycle in Arctic main river regions with 10 km resolution. A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727652022

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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