A Big Earth Data Platform for Three Poles

**Datset of sea inflow runoff (each runoff component) of the two major river basins in the Arctic (1971-2018)**

1、Description

The data set includes the observed and simulated runoff into the sea and the composition of each runoff component (total runoff, glacier runoff, snowmelt runoff, rainfall runoff) of two large rivers in the Arctic (North America: Mackenzie, Eurasia: Lena), with a time resolution of months. The data is a vic-cas model driven by the meteorological driving field data produced by the project team. The observed runoff and remote sensing snow data are used for correction. The Nash efficiency coefficient of runoff simulation is more than 0.85, and the model can also better simulate the spatial distribution and intra/inter annual changes of snow cover. The data can be used to analyze the runoff compositions and causes of long-term runoff change, and deepen the understanding of the runoff changes of Arctic rivers.

2、Keywords

Theme：Runoff,Surface Water,Snow,Glacier melt,Hydrology,Glacier(Ice Sheet),Snow melt,Runoff  
Discipline：Terrestrial Surface,Cryosphere  
Places：Arctic  
Time：1971-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：5.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：75.6 | - |
| west：-140.1 | - | east：141.6 |
| - | south：44.9 | - |

5、Time frame:1970-12-31 16:00:00+00:00--2018-12-31 03:59:59+00:00

6、Reference method

References to data:

ZHAO Qiudong, WU Yuwei. Datset of sea inflow runoff (each runoff component) of the two major river basins in the Arctic (1971-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727322022

References to articles:

7、Supporting project information

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

8、Data resource provider

name: WU Yuwei  
unit: Northwest University  
email: 20175204@nwu.edu.cn  
  
name: ZHAO Qiudong  
unit:   
email: zhaoqiudong@nieer.ac.cn