A Big Earth Data Platform for Three Poles

**Data set of 250m ice melt in the Antarctic marginal area (2000-2019)**

1、Description

In recent years, with the accelerated melting of the Antarctic ice sheet, a large amount of ice melt water has formed on the surface of the ice sheet. A deep understanding of the spatial and temporal distribution and dynamic changes of melt water on the Antarctic ice sheet is of great significance for the study of the material balance of the Antarctic ice sheet. Based on Landsat7 and landsat8 images with 30m spatial resolution from 2000 to 2019, this data set uses normalized water index, Gabor filtering and morphological path opening operations to generate ice melt raster data sets, and converts raster water masks into vector data in ArcGIS. This data set is based on the melting water data set of 250m ice surface in the Antarctic ice sheet melting area (Alexander Island, Antarctic Peninsula) from 2000 to 2019 extracted from Landsat images. The time is concentrated from December to February of the next year (summer in the southern hemisphere)

2、Keywords

Theme：Glacier(Ice Sheet)  
Discipline：Cryosphere  
Places：Marginal Polar Region  
Time：2000-2019,

3、Data details

1.Scale：None

2.Projection：South\_Pole\_Stereographic

3.Filesize：1428.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：70.77 | - |
| west：66.81 | - | east：71.5 |
| - | south：73.31 | - |

5、Time frame:1999-12-31 16:00:00+00:00--2019-12-01 03:59:59+00:00

6、Reference method

References to data:

YANG Kang. Data set of 250m ice melt in the Antarctic marginal area (2000-2019). A Big Earth Data Platform for Three Poles, doi:10.11888/Cryos.tpdc.2727392022

References to articles:

7、Supporting project information

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

8、Data resource provider

name: YANG Kang  
unit:   
email: kangyang@nju.edu.cn