A Big Earth Data Platform for Three Poles

**Time series dataset of lake area on Qinghai-Tibet Plateau for the past 100 years (1920-2020)**

1、Description

Three different data sources are used, including maps of the early Republic of China in 1920s, digital topographic maps in 1960 and Landsat MSS/TM/ETM+/OLI images from 1970 to 2020. In 1920s, the maps were scanned, geometrically corrected and georeferenced. In the 1960s, 1:250000 topographic maps were used. All maps are georeferenced by Albers Equivalent Conical Projection, and the root mean square (RMS) error is less than 1.5 pixels. For the early maps, visual interpretation and manual digitization were chosen to vectorize the lake boundaries. Since 1990, the semi-automatic water body classification method has been used to distinguish water body and non water body information from Landsat images, and then the lake boundary has been extracted, and visual inspection and manual editing have been carried out by comparing with the original Landsat images.

2、Keywords

Theme：Surface Water,Lakes
Discipline：Terrestrial Surface
Places：Qinghai-Tibetan Plateau
Time：one-hundred-year, 1920-2020

3、Data details

1.Scale：None

2.Projection：Albers

3.Filesize：104.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：70.0 | - | east：105.0 |
| - | south：25.0 | - |

5、Time frame:1919-12-31 16:00:00+00:00--2020-12-30 16:00:00+00:00

6、Reference method

References to data:

ZHANG Guoqing, RAN Youhua. Time series dataset of lake area on Qinghai-Tibet Plateau for the past 100 years (1920-2020). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2728912022

References to articles:

7、Supporting project information

Basic Science Center forTibetan Plateau Earth System
Second Tibetan Plateau Scientific Expedition and Research

8、Data resource provider

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