A Big Earth Data Platform for Three Poles

**Data set of recent Lake area and water volume changes in the Qinghai Tibet Plateau (1976-2013)**

1、Description

1) area data of 317 lakes larger than 10 km2 in 1976, 1990, 2000, 2005 and 2013 were obtained based on multi temporal Landsat images;  
2) Combining SRTM DEM and Landsat images, the data of lake water volume change in 1976-1990, 1990-2000, 2000-2005 and 2005-2013 were obtained;  
3) The accuracy of Lake area is controlled in one pixel, and the accuracy of water volume change is about 5%;  
4) This data has been applied to the study of recent changes in lake water volume in the Qinghai Tibet Plateau, and the results have been published in remote sensing of environment. In other future studies, this data can also be used as basic data, as well as in the analysis of changes in ecological environment, climate change, Lake water quality, etc

2、Keywords

Theme：Surface Water,Hydrology,Lakes  
Discipline：Terrestrial Surface  
Places：Qinghai-Tibetan Plateau  
Time：1976~2013

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.0 | - |
| west：76.0 | - | east：101.0 |
| - | south：28.0 | - |

5、Time frame:1976-01-10 08:00:00+00:00--2014-01-09 08:00:00+00:00

6、Reference method

References to data:

ZHU Liping. Data set of recent Lake area and water volume changes in the Qinghai Tibet Plateau (1976-2013). A Big Earth Data Platform for Three Poles, doi:10.11888/Hydro.tpdc.2703972020

References to articles:

Qiao, B,J., Zhu, L,P., Yang, R,M. (2019). Temporal-spatial differences in lake water storage changes and their links to climate change throughout the Tibetan Plateau, Remote Sensing of Environment, 222, 232-243.  
  
Yang, R.M., Zhu, L.P., et al., (2017). Spatiotemporal variations in volume of closed lakes on the Tibetan Plateau and their climatic responses from 1976 to 2013. Clim. Chang. 140 (3–4), 621–633.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

name: ZHU Liping  
unit: Institute of Tibetan Plateau Research, CAS  
email: lpzhu@itpcas.ac.cn