A Big Earth Data Platform for Three Poles

**Hydrogen and oxygen isotopes and hydrological information data set of lake water in the source area of the Yellow River (2014-2016)**

1、Description

In April 2014 and may 2016, 21 Lakes (7 non thermal lakes and 14 thermal lakes) were collected in the source area of the Yellow River (along the Yellow River) respectively. The abundance of hydrogen and oxygen allogens was measured by Delta V advantage dual inlet / hdevice system in inno tech Alberta laboratory in Victoria, Canada. The isotope abundance was expressed in the form of δ (‰) (relative to the average seawater abundance in Vienna) ）Test error: δ 18O: 0.1 ‰, δ D: 1 ‰. The data also includes Lake area and lake basin area extracted from Landsat 2017 image data in Google Earth engine.

2、Keywords

Theme：Precipitation,Evapotranspiration,Surface Water,Precipitation amount,Stable isotopes,Evaporation,Humidity/Dryness,Hydrology,Frozen Ground,Water Quality/Water Chemistry,Water yield,Thermokarst lake,Atmospheric Water Vapor
Discipline：Atmosphere,Terrestrial Surface,Cryosphere
Places：Source Area of the Yellow River
Time：2014-2016

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.36MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.0 | - |
| west：97.0 | - | east：99.0 |
| - | south：34.0 | - |

5、Time frame:2014-04-10 00:00:00+00:00--2016-06-09 00:00:00+00:00

6、Reference method

References to data:

WAN Chengwei. Hydrogen and oxygen isotopes and hydrological information data set of lake water in the source area of the Yellow River (2014-2016). A Big Earth Data Platform for Three Poles, doi:10.1016/j.scitotenv.2019.06.4272020

References to articles:

Wan, C., Gibson, J. J., Shen, S., Yi, Y., Yi, P., & Yu, Z. (2019). Using stable isotopes paired with tritium analysis to assess thermokarst lake water balances in the Source Area of the Yellow River, northeastern Qinghai-Tibet Plateau, China. Science of the Total Environment, 689, 1276-1292.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program
Strategic leading science and technology project of Chinese Academy of Sciences (category A)
Study on hydrological connections between thermokarst lake and talik aquifer in the head area of the yellow river

8、Data resource provider

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