A Big Earth Data Platform for Three Poles

**Continuous simulation of Holocene effective moisture change in typical lake regions of the Tibetan Plateau and East and Central Asia**

1、Description

The fluctuation of a single lake level is a comprehensive reflection of water balance within the basin, while the regional consistent fluctuations of lake level can indicate the change of regional effective moisture. Previous researches were mainly focused on reconstructing effective moisture by multiproxy analyses of lake sediments, but lacked the quantitative studies on regional effective moisture variation. This dataset exhibits the Holocene effective moisture change in typical lake regions of the Tibetan Plateau and East and Central Asia, including Qinghai Lake, Chen Co, Bangong Co, etc., by constructing a virtual lake system, based on a lake energy balance model, a lake water balance model and a transient climate evolution model. The simulation results provide a new perspective for exploring the evolution of lakes on the millennial scale.

2、Keywords

Theme：paleoclimate modeling,Others  
Discipline：Palaeoenvironment  
Places：Tibetan Plateau, East and Central Asia  
Time：Holocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.0195MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：60.0 | - |
| west：60.0 | - | east：135.0 |
| - | south：15.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

LI Yu . Continuous simulation of Holocene effective moisture change in typical lake regions of the Tibetan Plateau and East and Central Asia. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2721892022

References to articles:

李育, 张宇欣, 张新中, 叶旺庭, 徐玲梅, 韩琴, 李依婵, 刘和斌, 彭思敏. (2020). 以东亚及中亚地区虚拟湖泊水位变化为代表的全新世有效水分变化的连续模拟. 中国科学:地球科学, 50, 1106-1121.  
  
Li, Y., Zhang, Y.X., Zhang, X.Z., Ye, W.T., Xu, L.M., Han, Q., Li, Y.C., Liu, H.B., & Peng, S.M. (2020). A continuous simulation of Holocene effective moisture change represented by variability of virtual lake level in East and Central Asia. Science China Earth Sciences, 63, 1161-1175.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program  
the Second Tibetan Plateau Scientific Expedition and Research Program

8、Data resource provider

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