A Big Earth Data Platform for Three Poles

**Data set of δ18O stable Isotopes in Precipitation from Tibetan Network for Isotopes(1991–2008)**

1、Description

The stable oxygen isotope ratio (δ 18O) in precipitation is a comprehensive tracer of global atmospheric processes. Since the 1990s, efforts have been made to study the isotopic composition of precipitation at more than 20 stations located on the TP of the Tibetan Plateau, which are located at the air mass intersection between westerlies and monsoons.  
In this paper, we establish a database of monthly precipitation δ 18O over the Tibetan Plateau and use different models to evaluate the climate control of precipitation δ 18O over TP. The spatiotemporal pattern of precipitation δ 18O and its relationship with temperature and precipitation reveal three different domains, which are respectively related to westerly wind (North TP), Indian monsoon (South TP) and their transition.

2、Keywords

Theme：Precipitation,Precipitation,Stable hydrogen and oxygen isotope,Precipitation amount,Hydrology,Water Quality/Water Chemistry  
Discipline：Atmosphere,Terrestrial Surface  
Places：the Qinghai-Tibet Pleatu  
Time：1991-2008

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：0.212MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：37.7666666666667 | - |
| west：97.3666666666667 | - | east：75.2666666666667 |
| - | south：27.9833333333333 | - |

5、Time frame:1991-10-07 02:00:00+00:00--2009-08-20 00:00:00+00:00

6、Reference method

References to data:

GAO Jing. Data set of δ18O stable Isotopes in Precipitation from Tibetan Network for Isotopes(1991–2008). A Big Earth Data Platform for Three Poles, doi:10.11888/Geogra.tpdc.2709402020

References to articles:

Tandong Yao, Valerie Masson‐Delmotte, Jing Gao, Wusheng Yu, Xiaoxin Yang, Camille Risi, Christophe Sturm, Martin Werner, Huabiao Zhao, You He, Wei Ren, Lide Tian, Chunming Shi, Shugui Hou. (2013). A review of climatic controls on δ18O in precipitation over the Tibetan Plateau: Observations and simulations, Rev. Geophys., 51, 525– 548, doi:10.1002/rog.20023.

7、Supporting project information

the “Strategic Priority Research Program (B)” of the Chinese Academy of Sciences  
the National Natural Science Foundation of China  
the External Cooperation Program of the Chinese Academy of Sciences

8、Data resource provider

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