A Big Earth Data Platform for Three Poles

**Major Element Dataset of the Fenghuoshan Group from the Hoh Xil Basin**

1、Description

Collision between the Indian and Eurasian plates produced concomitant uplift of the Tibetan Plateau and its basin-ridge geomorphological systems. Surface relief of the Tibetan Plateau has significant dynamic and thermal effects on atmospheric circulation and on regional and global climate. It has been considered as one of the key drivers for the formation of the Asian monsoon, enhanced erosion and weathering, global decreased CO2 during the Cenozoic. Finally, this uplift caused global cooling in the Cenozoic. However, at present, the driving mechanisms of these processes still remain controversies and have not been clearly confirmed by records of chemical weathering from the Tibetan Plateau. This dataset includes major elemental compositions of the Fenghuoshan Group (thick of ~4500 m) from the Hoh Xil Basin which has been dated back to the Late Cretaceous-Eocence. Element was measured in the Institute of Geology and Geophysics, Chinese Academy of Sciences using XRF-1500. The resconstructed Paleogene chemical weathering sequences allow us to constrain the trends of chemical weathering history of the studied area. We found that intensity of chemical weathering is well correlated with global temperature change. These results provide further data supprot for discussing the dynamic mechanisms and links among the Paleogene chemical weathering in the Hoh Xil Basin, uplift of the Tibetan Plateau, and global change.

2、Keywords

Theme：Chemical Weathering,Major elements,Geochemistry,Terrestrial sediment records,Paleoclimate Reconstruction,Sedimentary Record  
Discipline：Palaeoenvironment,Solid earth  
Places：Hoh Xil Basin, Tibetan Plateau, Fenghuoshan region  
Time：Paleogene

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：0.03MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：34.67 | - |
| west：92.5 | - | east：93.0 |
| - | south：34.5 | - |

5、Time frame:2018-12-31 16:00:00+00:00--2021-11-29 16:00:00+00:00

6、Reference method

References to data:

JIN Chunsheng. Major Element Dataset of the Fenghuoshan Group from the Hoh Xil Basin. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2718582021

References to articles:

7、Supporting project information

The Second Tibetan Plateau Scientific Expedition and Research Program (STEP)(2019QZKK0707)

8、Data resource provider

name: JIN Chunsheng  
unit:   
email: csjin@mail.iggcas.ac.cn