A Big Earth Data Platform for Three Poles

**Thermochronological data of Wuyu Basin and its surrounding areas in the southern Tibetan Plateau**

1、Description

The age constraints for the Cenozoic denudation history of the Wuyu region in the southern Tibetan Plateau provide evidence for the growth process of the plateau and the interaction process of tectonics-climate-erosion in this region. Apatite fission track thermochronology has a relatively lower closure temperature of ~100 °C, thus is capable of recording the denudation process of the upper crust. We collected 14 samples on terranes and sediments in the Wuyu Basin and vicinity in the southern Tibetan Plateau. These samples were fission track dated using the external detector method in the Northwest Institute of Eco-Environment and Resources, Chinese Academy of Sciences. The result shows fission track central age of terrane samples range in 44.8-11.7 Ma, and decomposed component age of detrital samples range in 36-13.4 Ma. Integrated analysis indicates the cooling age of these terranes and detritus both concentrate on the early-middle Miocene (23-12 Ma), suggesting significant rock exhumation of the study region in early-middle Miocene. We infer the exhumation event should be caused by the contemporaneous intense erosion and denudation, which is possibly related to the rapid uplift of the Lhasa-Qiangtang blocks or sharply wetting of southern Tibet. The main finding of this study is that significant denudation occurred in the early-middle Miocene in the Wuyu region, southern Tibetan Plateau.

2、Keywords

Theme：Rocks/Minerals,Tectonics
Discipline：Solid earth
Places：Wuyu Basin
Time：Miocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.044MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.9 | - |
| west：89.0 | - | east：90.0 |
| - | south：29.5 | - |

5、Time frame:None--None

6、Reference method

References to data:

HE Pengju. Thermochronological data of Wuyu Basin and its surrounding areas in the southern Tibetan Plateau. A Big Earth Data Platform for Three Poles, doi:10.11888/Geo.tpdc.2717722021

References to articles:

7、Supporting project information

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

8、Data resource provider

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