A Big Earth Data Platform for Three Poles

**Detrital zircon U-Pb age of Paleogene strata in Jianchuan basin, Yunnan Province**

1、Description

The Jianchuan Basin, as one of the most important Cenozoic basins at the southeastern Tibetan Plateau, is a key region for determining the spatial-temporal evolution of paleodrainage and tectonic of the southeastern Tibetan Plateau. The sedimentary sequence of Paleogene strata from the bottom to the top includes the Baoxiangsi, Shuanghe, and Jianchuan Formations. The Shuanghe Formation conformably overlays the Baoxiangsi Formation but is in angular unconformity contact with the overlying Jianchuan Formation. New twelve detrital zircon U-Pb geochronology data from Paleogene strata in this basin were measured by LA-ICP-MS. The Detrital zircon U-Pb age spectrum of the Baoxiangsi Formation has multiple age peak ranges of 200-320 Ma, 390-490 Ma, 690-920 Ma, 920-1120 Ma, and 1700-2000 Ma(obviously different from the overlying strata), but the Shuanghe Formation is almost all concentrated at 35-45 Ma and 200-280 Ma, and the Jianchuan Formation compared with the Shuanghe Formation has increased the age peak range of 720-900 Ma. These results indicate that significant provenance changes occurred between the Baoxiangsi Formation and the overlying strata(at ~ 41 Ma) in the Jianchuan Basin. Provenance analyses illustrate that the Hoh-Xil, Songpan-Ganzi, North Qiangtang, Yidun, and western Yangtze terranes served as major sources for the Baoxiangsi Formation, the adjacent Triassic and Eocene igneous rocks for the Shuanghe Formation, and the western Yangtze block, adjacent Triassic and Eocene igneous rocks for the Jianchuan Formation. Such provenance changes support that large-scale drainage reorganization occurred in the late Eocene(at ~41 Ma). This significant late Eocene provenance and drainage changes occurred as one of the responses to coeval topographic uplift at the southeastern Tibetan Plateau and contemporary extensive magmatism.

2、Keywords

Theme：Rocks/Minerals,Tectonics
Discipline：Solid earth
Places：Jianchuan Basin
Time：Eocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.514MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：26.7 | - |
| west：99.8 | - | east：100.0 |
| - | south：26.5 | - |

5、Time frame:None--None

6、Reference method

References to data:

FENG Ying. Detrital zircon U-Pb age of Paleogene strata in Jianchuan basin, Yunnan Province. A Big Earth Data Platform for Three Poles, doi:10.11888/Geo.tpdc.2717702021

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

name: FENG Ying
unit:
email: fengy13@lzu.edu.cn