A Big Earth Data Platform for Three Poles

**Detrital zircon U-Pb chronological dataset of the Cretaceous-Pliocene sediments from the Tierekesazi section in the Pamir-Tian Shan Convergence Zone**

1、Description

This dataset includes 14 detrital zircon U-Pb chronological data from Cretaceous-Pliocene sediments sampled from Tierekesazi section in the Pamir-Tian Shan convergence zone. Detrital zircon in sedments could reveal the coupling of sedimentary basin and adjacented orogenic belt. U-Pb age of detrital zircon is a important method to analysis provenance tracing of sediments in basin. Moreover, this method also could constrain the uplift process of orogenic belt. Purification of detrital zircon grain following standard protocols includes contents, jaw crusher, shaking table, magnetic separator and heavy liquids. The separated zircon grains were mounted in epoxy resin and polished for LA-ICP-MS analysis. Cathodoluminescence (CL) images were taken for potential target spot selection. Each sample chose 120 points as potential target spot, at least. Zircon U-Pb dating was conducted using an Agilent 7500a Q-ICP-MS coupling with a 193 nm COMPex Pro laser. U-Pb age distributions were counted and analysed using DensityPlotter. U-Pb age of sediments of Tierekesazi section reveal chronology of Cretaceous-Pliocene strata of the profile, Tierekesazi section located in the narrow Pamir-Tian Shan convergence zone, the Mesozoic-Cenozoic sediments in the Tierekesazi section were sourced from the adjacent and eroding Pamir and Tian Shan mountain ranges.which provide a general context for our provenance analyses. This data allowed us to reconstruct the Cretaceous-Pliocene tectonic-geomorphic evolution of the Pamir-Tian Shan corridor.

2、Keywords

Theme：Tectonics,Terrestrial sediment records,Basin tectonics,Sedimentary Record
Discipline：Solid earth
Places：Pamir-Tian Shan convergence zone, Tierekesazi
Time：Cretaceous, Pliocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.2MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.92 | - |
| west：74.5 | - | east：74.58 |
| - | south：39.75 | - |

5、Time frame:None--None

6、Reference method

References to data:

FU Bihong. Detrital zircon U-Pb chronological dataset of the Cretaceous-Pliocene sediments from the Tierekesazi section in the Pamir-Tian Shan Convergence Zone. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2718762021

References to articles:

Jia, Y., Glotzbach, C., Lü, L., & Ehlers, T.A. (2021). Cenozoic tectono- geomorphologic evolution of the Pamir-Tian Shan convergence zone: Evidence from detrital zircon U-Pb provenance analyses. Tectonics, 40, e2020TC006345.

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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