A Big Earth Data Platform for Three Poles

**Data set of Precambrian continental crust basement of Qilian block**

1、Description

This data includes zircon U-Pb dating of metamorphic rocks and basalts in the Precambrian continental crust remnant in the northwest of the North Qilian orogenic belt measured from 2019 to 2021, major and trace and Sr nd Hf isotopic geochemical test results of the whole rock, and major and trace geochemical test results of minerals. The main instruments used are Aglient 7500a ICP-MS, X-ray fluorescence (XRF), inductively coupled plasma mass spectrometry (ICP-MS), thermo Finnigan Triton thermal ionization mass spectrometer (TIMS), Neptune MC ICPMS and electron microprobe (EMPA). The data quality is high and within the error range. According to the data, the Precambrian continental crust fragments can be divided into three stages: Paleoproterozoic (1.7 GA), early Mesoproterozoic (1.6 GA) and middle Mesoproterozoic (1.5-1.2 GA), which were formed in the continental margin arc, intracontinental rift and initial ocean basin environment respectively. It is revealed that the Qilian block is located in the southwest of the core of the ancient lombia supercontinent.

2、Keywords

Theme：Trace elements,Geochemistry,Tectonics,geochemistry,Isotopic geochemistry
Discipline：Solid earth
Places：Qilian Block
Time：Proterozoic

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.5 | - |
| west：97.0 | - | east：100.0 |
| - | south：40.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

LIU Yixin. Data set of Precambrian continental crust basement of Qilian block. A Big Earth Data Platform for Three Poles, doi:10.11888/Geo.tpdc.2718272021

References to articles:

Liu, Y.X., Wang, J.R., Liu, Y.W., Miao, X.Q., & Chen, J.L. (2021). Evolution of the Columbia supercontinent: Insights from the North Qilian Block, NW China. Precambrian Research, 366, 106424

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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