A Big Earth Data Platform for Three Poles

**Transition from oceanic subduction to continental collision in central Tibet: evidence from the Cretaceous magmatism in Qiangtang block**

1、Description

The late Mesozoic Magmatic arc of the South Qiangtang terrane is related to the long-term subduction of Bangong Lake Nujiang Tethys ocean and the subsequent collision of Lhasa Qiangtang terrane. However, the geological evolution from oceanic lithosphere subduction to continental collision is not clear. In view of this scientific problem, through the study of volcanic rocks in mudijiangya area of South Qiangtang terrane, the following achievements and understandings have been obtained（ 1) Zircon U-Pb dating data of two groups of volcanic rocks in mudijiangya area, Shuanghu County, central Qinghai Tibet Plateau show that the volcanic rocks of qushenla formation were formed at 114 Ma and those of abushan formation were formed at 76-75 ma（ 2) The original magma of the volcanic rocks in the qushenla formation may be derived from partial melting of mantle peridotite contaminated by crustal materials, which is related to the plate rotation of the northward subducted Bangong Nujiang Tethys oceanic crust（ 3) The original magma of volcanic rocks in the abushan formation may be a mixture of crustal melt and asthenospheric mantle, which is related to the lithospheric delamination in the Lhasa Qiangtang collision area.

2、Keywords

Theme：collision event,Geochemistry,Tectonics,Ziron U-Pb dating,Isotopic geochemistry  
Discipline：Solid earth  
Places：Tibet, Qiangtang  
Time：Cretaceous

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.53MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：32.4 | - |
| west：89.0 | - | east：89.5 |
| - | south：32.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

HE Haiyang, LI Yalin. Transition from oceanic subduction to continental collision in central Tibet: evidence from the Cretaceous magmatism in Qiangtang block. A Big Earth Data Platform for Three Poles, doi:10.1080/00206814.2020.18679122021

References to articles:

He, H. , Li, Y. ,Ning, Z. ,Wang, C., & Chen, L. (2020). Transition from oceanic subduction to continental collision in central tibet: evidence from the cretaceous magmatism in qiangtang block. International Geology Review, (7), 1-19.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: HE Haiyang  
unit:   
email: 3001150086@cugb.edu.cn  
  
name: LI Yalin  
unit:   
email: liyalin@cugb.edu.cn