A Big Earth Data Platform for Three Poles

**Geochemical data set of the Zhengga Eocene granite in Lhasa, southern Tibet**

1、Description

This data set is derived from the paper: Ma, L. \*, Wang, Q. \*, Kerr, A.C., Yang, J.H., Xia, x.p., ou, Q., Yang, Z.Y., sun, P., 2017. Paleocene (ca. 62 MA) leucogenes in southern Lhasa, Tibet: products of syn colonial strategic analysis during slab roll back? Journal of petroleum, 58 (11): 2089-2114. This research achievement is supported by the special project "deep process and resource effect of major geological events in Yanshanian period" (2016yfc0600400) of national key R & D Program "exploration and exploitation of deep resources". This achievement is a part of the research achievements of associate researcher Ma Lin, researcher Wang Qiang and their team in petrology and deep dynamics of the Qinghai Tibet Plateau. The team applied petrological and geochemical methods to reconstruct the collision evolution history of the southern margin of the Himalayan Tibetan Plateau orogenic belt. The Paleocene (63-58 MA) garnet two mica granite and biotite granite assemblage were determined by the applicant in Gangdise. It is found that the two types of rocks have the same sr-nd-hf-o isotopic composition, but the major elements show the characteristics of increasing with the increase of Si Al composition and decreasing with the decrease of Mg Fe composition. At the same time, similar mineral composition evolution is found, including the transformation from mg biotite to iron biotite, the continuous composition evolution of medium feldspar Pei feldspar aofeldspar albite, and the increasing composition of garnet core to edge, It is revealed that garnet two mica granite is the product of high differentiation evolution of Cenozoic lower crust melt, which provides petrological evidence for the high differentiation genesis of I-type leucogranite. The study also reveals that the Gangdise syn collisional anatexis is related to the diachronic collision of the Indo subcontinent. The interaction model of continental collision and oceanic subduction also provides reference and Enlightenment for understanding the abnormal thermal phenomena of the crust and lithosphere in the global large convergent orogenic belts. The data are from the appendix of this paper. The data set includes: 1. Data of major oxides and trace elements; 2. Whole rock SR Nd isotopic data; 3. Sims zircon U-Pb dating data; 4. LA-ICP-MS zircon U-Pb dating data; 5 zircon HF-O isotope data.

2、Keywords

Theme：dating,lava,high silica granite,magma,Rocks/Minerals,Geochemistry,Highly fractionated granite,Zircon Hf-O isotope,Element geochemistry,Geologic Hazard,Sr-Nd isotope
Discipline：Solid earth
Places：southern Tibet
Time：Paleocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.039MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：29.3 | - |
| west：92.15 | - | east：92.2 |
| - | south：29.25 | - |

5、Time frame:None--None

6、Reference method

References to data:

MA Lin. Geochemical data set of the Zhengga Eocene granite in Lhasa, southern Tibet. A Big Earth Data Platform for Three Poles, doi:10.11888/Geo.tpdc.2713462021

References to articles:

Ma, L.\*, Wang, Q.\*, Kerr, A.C., Yang, J.H., Xia, X.P., Ou, Q., Yang, Z.Y., Sun, P. (2017). Paleocene (ca. 62 Ma) leucogranites in southern Lhasa, Tibet: products of syn-collisional crustal anatexis during slab roll-back? Journal of Petrology, 58(11): 2089-2114.

7、Supporting project information

The deep process and resource effect of major geological events in Yanshan period

8、Data resource provider

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