A Big Earth Data Platform for Three Poles

**Carbonate content and C, O isotope data of the Aksu section in the Tajik Basin**

1、Description

This dataset includes contents, stable carbon and oxygen isotopes of carbonates in the Aksu section, Tajik Basin. Stable carbon and oxygen isotopes from carbonates are important climatic proxies in paleoenvironmental reconstruction. The samples are sampled from fine-grained sediments (siltstone, clay) in the late Eocene-early Oligocene continental strata of the Aksu section in the central Tajik Basin. The sediment samples were grounded and sieved through a 100 mesh screen, and then directly analyzed using an isotope ratio mass spectrometer (MAT-252) with an automated carbonate preparation device (Kiel Ⅱ). C, O isotope ratios are converted to Vienna Pee Dee Belemnite (V-PDB) standards. Typical analytical errors for C, O isotope are within ±0.1‰ (±0.06‰ and ±0.08‰ for carbon isotope and oxygen isotope, respectively). The carbonate content was measured by neutralization titration with an accuracy of 0.5%. The ages of the data were obtained by linear interpolation based on magnetostratigraphy. Based on the carbonate concentrations and the stable carbon and oxygen isotopes of the Tajik Basin, the paleoenvironmental evolution history during the late Eocene and early Oligocene can be well reconstructed, being useful for discussing the environmental effects of the uplift of the Indo-Eurasia collision and the global climatic changes.

2、Keywords

Theme：Carbonate,Paleoclimate Reconstruction
Discipline：Palaeoenvironment
Places：Aksu Section, Tajik Basin
Time：late Eocene, early Oligocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.16MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.0 | - |
| west：67.0 | - | east：69.0 |
| - | south：37.0 | - |

5、Time frame:2021-12-31 16:00:00+00:00--2022-02-28 16:00:00+00:00

6、Reference method

References to data:

SUN Jimin. Carbonate content and C, O isotope data of the Aksu section in the Tajik Basin. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2723292022

References to articles:

Sun, J.M., Liu, W.G., Guo, Z.T., Qi, L., & Zhang, Z.L. (2022). Enhanced aridification across the Eocene/Oligocene transition evidenced by geochemical record in the Tajik Basin, Central Asia. Global and Planetary Change, 211, 103789. https://doi.org/10.1016/j.gloplacha.2022.103789.

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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