A Big Earth Data Platform for Three Poles

**Paleomagnetic and Paleoclimatic data sets of Dahonggou section in Qaidam Basin, China**

1、Description

1) Data content:
Paleomagnetic data, magnetic index data, major element percentage data and chemical weathering index can establish the paleomagnetic age framework of the Dahonggou section and restore the precipitation change and chemical weathering history in geological history.
2) Data sources and processing methods
The data source is experimental data.
Paleomagnetic data: a cylindrical sample of 2x2x2cm was drilled with a small gasoline drill and measured with a low-temperature superconducting magnetometer in a magnetic shielding room.
Magnetic data: the samples collected in the field were ground into fine particles by mortar and put into 2x2x2 non-magnetic plastic box, and tested by kappa bridge susceptibility meter, pulse magnetometer and rotating magnetometer.
Mass percentage content and chemical weathering index data of major elements in the whole sample and particle size fraction: firstly, the whole sample and particle size fraction sample were pretreated with acetic acid and hydrogen peroxide to remove carbonate and organic matter, and then pressed into a round cake with a diameter of about 4cm and a thickness of about 8mm by a pressure apparatus, and finally XRF fluorescence analysis was carried out.
3) Data quality
The sample collection and experimental processing are carried out according to strict standards, and the data quality is reliable.
4) Data application achievements and Prospects
Three SCI papers were published using this set of data, one of which is Ni.

2、Keywords

Theme：Paleomagnetic data,Magnetic susceptibility,Sediments,Paleoclimate Reconstruction
Discipline：Palaeoenvironment
Places：Qaidam Basin
Time：Miocene

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.6MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：37.33 | - |
| west：95.8 | - | east：95.9 |
| - | south：37.29 | - |

5、Time frame:2016-11-30 16:00:00+00:00--2020-12-31 03:59:59+00:00

6、Reference method

References to data:

NIE Junsheng. Paleomagnetic and Paleoclimatic data sets of Dahonggou section in Qaidam Basin, China. A Big Earth Data Platform for Three Poles, doi:10.11888/Paleoenv.tpdc.2711232021

References to articles:

Nie, J.S., Ren, X.P., Saylor, J.E., Su, Q.D., Horton, B.K., Bush, M.A., Chen, W.H., & Pfaff, K. (2019). Magnetic polarity stratigraphy, provenance, and paleoclimate analysis of Cenozoic strata in the Qaidam Basin, NE Tibetan Plateau. GSA Bulletin, 132, 310-320.

Ren, X. P., Nie, J. S., Saylor, J. E., Wang, X. X., Liu, F. B., Horton, B. K. (2020). Temperature Control on Silicate Weathering Intensity and Evolution of the Neogene East Asian Summer Monsoon. Geophysical Research Letters, 47(15).

Ren, X. P., Nie, J. S., Saylor, J. E., Li, H., Bush, M. A., Horton, B. K. (2019). Provenance Control on Chemical Weathering Index of Fluvio-Lacustrine Sediments: Evidence From the Qaidam Basin, NE Tibetan Plateau. Geochemistry, Geophysics, Geosystems 20, 3216-3224.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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