A Big Earth Data Platform for Three Poles

**Paleomagnetic data from the lunpola basin**

1、Description

The Lunpola Basin in the central Tibetan Plateau is situated along the southern margin of the east-west stretched Banggong-Nujiang suture belt between the Qiangtang Terrane and the Lhasa Terrane. The thick and continuous Cenozoic sediments in the basin can provide great potential for understanding the tectonic uplift, paleoaltimetry, erosion and depositional history of the Tibetan Plateau and climate environmental evolution. However, the study of geologic and climatic changes has been hindered by poor age constraints on the Cenozoic sedimentary sequence in the Lunpola Basin, especially its upper part with typical lacustrine oil shale sediments due to the discontinuous or unexposed outcrop caused by erosion or weathering. In this study, we investigated a 658 m-thick Cenozoic continuous lacustrine sedimentary section, Lunpori, from the upper sequence of the central basin. We found two layers of tuffs in this section and then carried out detailed paleomagnetic measurements. Constrained by tie points of U-Pb zircon ages, the observed magnetic zones are well correlated with chrons C5Bn.2n to C6AAn of the Geomagnetic Polarity Time Scale, yielding ages of ~21.2 to 15 Ma for the section. Lithofacies, pollen and fossil records suggest a relative temperate, humid climate prevailing in the Lunpola Basin during the period of Dingqinghu Formation, indicating that the Indian monsoon occurred before ~26 Ma.Through paleomagnetic analysis and testing of fluvial and lacustrine facies strata in Lumpola Basin since Miocene, 22Ma-15Ma magnetic stratigraphic chronology has been obtained.

2、Keywords

Theme：Paleontology
Discipline：Solid earth
Places：Lumpola
Time：210 Million years-150 Million years

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.07MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：31.9 | - |
| west：89.6 | - | east：89.7 |
| - | south：31.8 | - |

5、Time frame:None--None

6、Reference method

References to data:

TAN Mengqi. Paleomagnetic data from the lunpola basin. A Big Earth Data Platform for Three Poles, doi:10.11888/Geo.tpdc.2702822019

References to articles:

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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