A Big Earth Data Platform for Three Poles

**Carbon isotope data of T / J boundary marine strata in suobcha area, Wenquan area, South Qiangtang sag, Qiangtang basin, Tibet**

1、Description

The samples were collected from the suobcha section of Wenquan area, South Qiangtang sag, Qiangtang basin, Tibet. The carbon isotope data were measured by thermo Finnigan mat-253 carbon isotope mass spectrometer at Beijing Institute of uranium geology, CNNC. The mass extinction event of the Late Triassic is relatively poorly-known among the five major extinction events in the Phanerozoic. Moreover, the typical marine Triassic-Jurassic (T-J) records are absent in regions other than the western Tethys and Boreal realms, and thus major questions remain as to the global significance and cause(s) of the event. Especially in the eastern Tethys, no marine sedimentary records of the T-J transition are known from open marine facies, and thus the extent and significance of the marine T-J transition are unclear. We show the first high-resolution carbonate carbon-isotope record, geochemistry, palaeontologic and lithological data from a marine T-J section (Wenquan section). In the columnar profile, we place the T-J boundary at the top of grainstone layers representing the shallowest water deposit. Our results reveal that the carbonate carbon-isotope record contains two different excursions in the Wenquan section of northern Tibet, China. These are consistent with the “initial” and “main” negative carbon-isotope excursions (CIEs) found in the global stratotype section and point (GSSP), strongly suggesting their global nature. A biological crisis together with paleoceanographic changes was identified near the main CIE. This means that a mass of isotopically light carbon was rapidly released into the air and oceans, resulting in environmental changes and biological crisis.

2、Keywords

Theme：Geochemistry,Macrofossils,Paleoclimate Reconstruction,Carbon isotope  
Discipline：Palaeoenvironment,Solid earth  
Places：Qiangtang Basin  
Time：Triassic-Jurassic

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.5MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：32.67 | - |
| west：89.5 | - | east：90.0 |
| - | south：32.3 | - |

5、Time frame:None--None

6、Reference method

References to data:

HU Fangzhi. Carbon isotope data of T / J boundary marine strata in suobcha area, Wenquan area, South Qiangtang sag, Qiangtang basin, Tibet. A Big Earth Data Platform for Three Poles, doi:10.1016/j.gloplacha.2019.1030932021

References to articles:

Hu, F.Z., Fu, X.G., Lin, L., Song, C.Y., Wang, Z.W., & Tian, K.Z. (2019). Marine late Triassic-Jurassic carbon-isotope excursion and biological extinction records: New evidence from the Qiangtang Basin, eastern Tethys. Global and Planetary Change. 185. 103093. 10.1016/j.gloplacha.2019.103093.

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

name: HU Fangzhi  
unit:   
email: fuxiugen@126.com