A Big Earth Data Platform for Three Poles

**A data set about the tectonic geomorphology and lithology of the Cenozoic strata within and around the Tibetan Plateau**

1、Description

The Cenozoic strata developed within and around the Tibetan Plateau, contain fruitful information on the tectonic evolution, paleoenvironment and paleoclimate changes. It's very significant on revealing the history of the uplift and deformation of the Tibetan Plateau and its relevant effects on the regional and even global environment and climate. This data set contains several well developed sections, which have been identified by the systematic geological survey. Depending on the tools (e.g. GPS, geological compass) in the fieldwork, we have finished the geological measurements and descriptions of these sections as well as the relevant geological maps. It includes a 90-m loess deposit of the Duikang section in the Linxia basin, several fluvial and lacustrine deposits (such as the 1890-m Dayu section in the Lunpola basin, the 300-m Shuanghe section in the Jianchuan basin, the 252-m Caijiachong section in the Qujing basin) and a 932-m saline lacustrine deposit with gypsolyte of the Jiangcheng section in the Simao basin. This data set provides a solid geological foundation for the following researches on stratigraphic chronology, tectonic evolution, paleoenvironment and paleoclimate, and so forth.

2、Keywords

Theme：Topography,Others,Formation,Lacustrine Sediments,Loess,Fluvial Sediments,Tectonic geomorphology,Cenozoic,Terrestrial sediment records,Geomorphology,Sedimentary Record
Discipline：Terrestrial Surface,Palaeoenvironment,Solid earth
Places：Linxia basin, Lunpola basin, Qujing basin, Jianchuan basin, Simao basin
Time：Cenozoic

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：57.8MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.42 | - |
| west：89.78 | - | east：103.96 |
| - | south：22.59 | - |

5、Time frame:None--None

6、Reference method

References to data:

ZHANG Dawen , YAN Maodu, ZHANG Weilin, FANG Xiaomin , FANG Xiaomin. A data set about the tectonic geomorphology and lithology of the Cenozoic strata within and around the Tibetan Plateau. A Big Earth Data Platform for Three Poles, doi:10.11888/SolidEar.tpdc.2724282022

References to articles:

Zhang, W. L., Fang, X. M., Song, C. H., Yan, M. D., Wang, J. Y., Zhang, Z. G., Wu, F. L., Zan, J. B., Zhang, T., Yang, Y. B., & Tan, M. Q. (2020). Magnetostratigraphic constraints on the age of the Hipparion fauna in the Linxia Basin of China, and its implications for stepwise aridification. Palaeogeography, Palaeoclimatology, Palaeoecology, 537, 109413.

Fang, X. M., Dupont-Nivet, G., Wang, C. S., Song, C. H., Meng, Q. Q., Zhang, W. L., Nie, J. S., Zhang, T., Mao, Z. Q., & Chen, Y. (2020). Revised chronology of central Tibet uplift (Lunpola Basin). Science Advances, 6(50), eaba7298.

Fang, X. M., Yan, M. D., Zhang, W. L., Nie, J. S., Han, W. X., Wu, F. L., Song, C. H., Zhang, T., Zan, J. B., & Yang, Y. P. (2021). Paleogeography control of Indian monsoon intensification and expansion at 41 Ma. Science Bulletin, 66(22), 2320-2328.

Yan, M. D., Zhang, D. W., Fang, X. M., Zhang, W. L., Song, C. H., Liu, C. L., Zan, J. B., & Shen, M. M. (2021). New insights on the age of the Mengyejing Formation in the Simao Basin, SE Tethyan domain and its geological implications. Science China Earth Sciences, 64(2), 231-252.

7、Supporting project information

The Second Tibetan Plateau Scientific Expedition and Research（2019QZKK0707）

8、Data resource provider

name: ZHANG Weilin
unit: Institute of Tibetan Plateau Research, CAS
email: zhangwl@itpcas.ac.cn

name: FANG Xiaomin
unit: Institute of Tibetan Plateau Research, CAS
email: fangxm@itpcas.ac.cn

name: FANG Xiaomin
unit:
email: fangxm@itpcas.ac.cn

name: YAN Maodu
unit:
email: maoduyan@itpcas.ac.cn

name: ZHANG Dawen
unit: Zaozhuang University
email: zhangdawen@uzz.edu.cn