A Big Earth Data Platform for Three Poles

**Deformation data after 2008 Wenchuan earthquake (2008-2018)**

1、Description

The data set consists of 93 continuous and mobile GPS stations recording the cumulative three-dimensional deformation variables 10 years after the 2008 mw7.9 Wenchuan earthquake. GPS daily sampling time series data are mainly from the website of China Seismological Bureau（ http://www.cgps.ac.cn/ ）Diao, F., Wang, R., Wang, Y., Xiong, X., Walter, T.R. (2018), fault behavior and lower critical physiology informed from the first seven years of postseismic GPS data after the 2008 Wenchuan earthquake, earth planet. SCI. Lett., 495, 202-212, DOI: 10.1016/j.epsl.2018.05.020. We process the post earthquake deformation data as follows: first, we correct other effects unrelated to the Wenchuan earthquake, such as seasonal variation, interannual variation, plate effect, etc; Thirdly, the post earthquake time series curve is fitted by exponential function and logarithmic function; Finally, the post earthquake deformation of any period is calculated by fitting the curve. Ten years after the earthquake, the accumulated deformation is nearly 21 cm. The horizontal accuracy is not less than 1.7 cm, and the vertical accuracy is not less than 4 cm.

2、Keywords

Theme：Deformation observation,Tectonics  
Discipline：Solid earth  
Places：Wenchuan  
Time：2008-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.01MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：34.0 | - |
| west：100.0 | - | east：106.0 |
| - | south：30.0 | - |

5、Time frame:2008-05-11 16:00:00+00:00--2018-02-01 03:59:59+00:00

6、Reference method

References to data:

HU Yan. Deformation data after 2008 Wenchuan earthquake (2008-2018). A Big Earth Data Platform for Three Poles, 2021

References to articles:

7、Supporting project information

Second Tibetan Plateau Scientific Expedition Program

8、Data resource provider

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