A Big Earth Data Platform for Three Poles

**XKS waveform and splitting detection results of compass-elip seismic array (2010-2013)**

1、Description

The reconstruction of the craton by the mantle plume and its subsequent dynamic effects are important scientific issues related to the formation and evolution of the craton. Emeishan Large Igneous Province is located in the western margin of Yangtze craton, which is an ideal window to study the effect of mantle plume on craton reformation. With the support of the national key research and development program "Deep Process and Resource Effect of Important Yanshanian Events" (Grant 2016YFC0600400), the mantle deformation characteristics of Emeishan Large Igneous Province were obtained by using teleseismic shear wave (sks, SKKS and PKS) splitting; Combined with the wave velocity structure, geothermal flow and volcanic rock distribution, it reveals the strengthening effect of mantle plume on the craton and the profound influence of the strengthened lithosphere on the present deep process of the southeastern margin of the Qinghai Tibet Plateau; At the same time, it also provides a new perspective for further understanding the origin of seismic anisotropy at the top of the upper mantle and asthenosphere demonstrator interaction.

2、Keywords

Theme：XKS(SKS,SKKS and PKS),Seismology  
Discipline：Solid earth  
Places：ELIP  
Time：2010-2013

3、Data details

1.Scale：None

2.Projection：

3.Filesize：71.1MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：30.0 | - |
| west：98.0 | - | east：108.0 |
| - | south：23.0 | - |

5、Time frame:2010-10-31 16:00:00+00:00--2013-04-29 16:00:00+00:00

6、Reference method

References to data:

LI Wei, CHEN Yun. XKS waveform and splitting detection results of compass-elip seismic array (2010-2013). A Big Earth Data Platform for Three Poles, doi:10.12197/2020GA0102021

References to articles:

Li, W., Chen, Y., Liang, X., & Xu, Y.-G. (2021). Lateral seismic anisotropy variations record interaction between Tibetan mantle flow and plumestrengthened Yangtze Craton. Journal of Geophysical Research: Solid Earth, 126, e2020JB020841. https://doi. org/10.1029/2020JB020841

7、Supporting project information

Deep Process and Resource Effect of Important Yanshanian Events

8、Data resource provider

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