A Big Earth Data Platform for Three Poles

**Spatial distribution of multi-year means (2000-2018) and temporal trends (1982-2020) of the start and end of the vegetation growing season (SOS and EOS) across the Tibetan Plateau**

1、Description

This datasets include the spatial distribution multi-year means of the SOS and EOS from 2000 to 2018, and the temporal trends of the SOS and EOS from 1982 to 1999 and 2000 to 2020 across the Tibetan Plateau. Based on AVHRR NDVI, MODIS NDVI, and EVI, four steps were used to minimize bias and noise in SOS and EOS extracted from time series of vegetation indexes. First, pixels with multiple-year average vegetation indexes lower than a threshold are regarded as areas of low or no vegetation coverage and are excluded. The pixels with weak seasonality of greenness are also excluded. Second, values of vegetation indexes contaminated by snow cover, ice, or both in winter (December–early March) are substituted with the mean of non-contaminated, high-quality vegetation indexes values during winter. Third, remaining negative vegetation indexes bias caused by clouds and aerosols in other seasons is calibrated by a Savitzky–Golay filtering technique. Finally the improved annual time series of vegetation indexes is fitted to double logistic or modified double logistic functions. Based on thresholds and inflection-point, the SOS and EOS across the Tibetan Plateau were extracted. The spatial resolution of the datasets were 250m and 1/12°. The data quality is reliable.

2、Keywords

Theme：Plant phenology,Terrestrial Surface Remote Sensing  
Discipline：Terrestrial Surface  
Places：Tibetan Plateau  
Time：From 2000 to 2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：136.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.7 | - |
| west：73.5 | - | east：105.6 |
| - | south：24.7 | - |

5、Time frame:1981-12-31 16:00:00+00:00--2020-12-30 16:00:00+00:00

6、Reference method

References to data:

SHEN Miaogen . Spatial distribution of multi-year means (2000-2018) and temporal trends (1982-2020) of the start and end of the vegetation growing season (SOS and EOS) across the Tibetan Plateau. A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2727782022

References to articles:

Shen, M.G., Wang, S.P., Jiang, N., Sun, J.P., Cao, R.Y., Ling, X.F., Fang, B., Zhang, L., Zhang, L.H., Xu, X.Y., Lv, W.W., Li, B.L., Sun, Q.L., Meng, F.D., Jiang, Y.H., Dorji, T., Fu, Y.S., Iler, A., Vitasse, Y., Steltzer, H., Ji, Z.M., Zhao, W.W., Piao, S.L., Fu, B.J., (2022). Plant phenology changes and drivers on the Qinghai–Tibetan Plateau. Nature Reviews Earth & Environment. doi:10.1038/s43017-022-00317-5

7、Supporting project information

8、Data resource provider

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