A Big Earth Data Platform for Three Poles

**An evapotranspiration dataset based on upscaling eddy covariance observations over the temperate semi-arid grassland of China (1982-2015)**

1、Description

As an important part of global semi-arid grassland, adequately understanding the spatio-temporal variability of evapotranspiration (ET) over the temperate semi-arid grassland of China (TSGC) could advance our understanding of climate, hydrological and ecological processes over global semi-arid areas. Based on the largest number of in-situ ET measurements (13 flux towers) within the TSGC, we applied the support vector regression method to develop a high-quality ET dataset at 1 km spatial resolution and 8-day timescale for the TSGC from 1982 to 2015. The model performed well in validation against flux tower‐measured data and comparison with water-balance derived ET.

2、Keywords

Theme：Latent heat flux,Evapotranspiration,Radiation,Hydrology  
Discipline：Atmosphere,Terrestrial Surface  
Places：The temperate semi-arid grassland of China  
Time：1982-2015

3、Data details

1.Scale：None

2.Projection：

3.Filesize：3574.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：46.74 | - |
| west：103.45 | - | east：124.38 |
| - | south：35.51 | - |

5、Time frame:1981-12-31 16:00:00+00:00--2015-12-30 16:00:00+00:00

6、Reference method

References to data:

LEI Huimin. An evapotranspiration dataset based on upscaling eddy covariance observations over the temperate semi-arid grassland of China (1982-2015). A Big Earth Data Platform for Three Poles, doi:10.11888/Hydro.tpdc.2716602021

References to articles:

Pang, X., Lei, H., Cong, Z., Yang, H., Duan, L., & Yang, D. (2021). Long term variation of evapotranspiration and water balance based on upscaling eddy covariance observations over the temperate semi-arid grassland of China. Agricultural and Forest Meteorology, 308-309, 108566. doi:https://doi.org/10.1016/j.agrformet.2021.108566

7、Supporting project information

The National Natural Science Foundation  
The National Natural Science Foundation

8、Data resource provider

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