A Big Earth Data Platform for Three Poles

**Spatiotemporally continuous evapotranspiration data set across the North China Plain during 2008‒2019 using TSEB and data fusion (2008-2019)**

1、Description

The North China Plain (NCP), with an area of ~140,000 square kilometers, is among the most important agricultural producing bases in China. In addition to canal irrigation with surface water from the Yellow River, the NCP also needs much groundwater for intensive irrigation. Spatiotemporally continuous and daily evapotranspiration (ET) estimates of high spatial resolution could be valuable for improving our understanding of agricultural water consumption across the NCP, and also for improving water use efficiency for better agricultural water resource management practices over similar regions globally. This ET data set at 1 km spatial resolution and daily timescale across the NCP from Jan 2008 to Dec 2019 was generated using two source energy balance model (TSEB) and data fusion. The accuracy is generally comparable and even higher than published results, with our ET data set featuring spatiotemporal continuity and high spatial resolution for a decade. Furthermore, this data set and associated approaches are valuable for performing daily, monthly, seasonal, interannual, and trend analyses of ET in the NCP and similar regions globally.

2、Keywords

Theme：Thermal infrared remote sensing,Others,fusion,Remote Sensing Technology,Farmland,Evapotranspiration
Discipline：Terrestrial Surface,Remote Sensing Technology
Places：North China Plain
Time：decade, 2008-2019

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：7260.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.4062 | - |
| west：113.1787 | - | east：119.8263 |
| - | south：35.0073 | - |

5、Time frame:None--None

6、Reference method

References to data:

 ZHANG Caijin , LONG Di. Spatiotemporally continuous evapotranspiration data set across the North China Plain during 2008‒2019 using TSEB and data fusion (2008-2019). A Big Earth Data Platform for Three Poles, doi:10.1016/j.rse.2021.1125192022

References to articles:

Zhang, C., Long, D., Yan, L., & Bai, L. (2021). Spatiotemporally continuous evapotranspiration data set across the North China Plain during 2008‒2019 using TSEB and data fusion. PANGAEA, https://doi.org/10.1594/PANGAEA.926333

Zhang, C., Long, D., Zhang, Y., Anderson, M.C., Kustas, W.P., & Yang, Y. (2021). A decadal (2008–2017) daily evapotranspiration data set of 1 km spatial resolution and spatial completeness across the North China Plain using TSEB and data fusion. Remote Sensing of Environment, 262, 112519

7、Supporting project information

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National Natural Science Foundation of China

8、Data resource provider

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