A Big Earth Data Platform for Three Poles

**Terrestrial evapotranspiration dataset across China (1982-2017)**

1、Description

This dataset (version 1.5) is derived from the complementary-relationship method, with inputs of CMFD downward short- and long-wave radiation, air temperature, air pressure, GLASS albedo and broadband longwave emissivity, ERA5-land land surface temperature and humidity, and NCEP diffuse skylight ratio, etc. This dataset covers the period of 1982-2017, and the spatial coverage is Chinese land area. This dataset would be helpful for long-term hydrological cycle and climate change research.
Land surface actual evapotranspiration (Ea)，unit: mm month-1.
The spatial resolution is 0.1-degree;
The temporal resolution is monthly;
The data type is NetCDF;
This evapotranspiration dataset is only for land surface.

2、Keywords

Theme：Evapotranspiration,Atmospheric Water Vapor
Discipline：Atmosphere,Ocean
Places：China
Time：1982-2017

3、Data details

1.Scale：None

2.Projection：

3.Filesize：461.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：55.0 | - |
| west：70.0 | - | east：140.0 |
| - | south：15.0 | - |

5、Time frame:1982-01-01 08:00:00+00:00--2017-12-30 19:59:59+00:00

6、Reference method

References to data:

MA Ning, Jozsef Szilagyi, ZHANG Yinsheng, LIU Wenbin. Terrestrial evapotranspiration dataset across China (1982-2017). A Big Earth Data Platform for Three Poles, doi:10.11888/AtmosPhys.tpe.249493.file2019

References to articles:

Ma, N., Szilagyi, J., Zhang, Y.S., &Liu, W.B. (2019). Complementary-relationship-based modeling of terrestrial evapotranspiration across China during 1982-2012: Validations and spatiotemporal analyses. Journal of Geophysical Research: Atmospheres, 124, 4326-4351. doi: 10.1029/2018JD029580.

Ma, N., & Szilagyi, J. (2019). The CR of evaporation: A calibration‐free diagnostic and benchmarking tool for large‐scale terrestrial evapotranspiration modeling. Water Resources Research, 55, 7246-7274. doi: 10.1029/2019wr024867.

7、Supporting project information

8、Data resource provider

name: Jozsef Szilagyi
unit: Budapest University of Technology and Economics
email: jszilagyi1@unl.edu

name: LIU Wenbin
unit: Institute of Geographical Sciences and Natural Resource Research, CAS
email: liuwb@igsnrr.ac.cn

name: ZHANG Yinsheng
unit:
email: yszhang@itpcas.ac.cn

name: MA Ning
unit:
email: ma.n2007@aliyun.com

name: MA Ning
unit:
email: ma.n2007@aliyun.com