A Big Earth Data Platform for Three Poles

**Global PEW Land Evapotranspiration Data Set (1982-2018)**

1、Description

This data set is a global surface evapotranspiration product based on the PEW model. The PEW model is a water energy based surface energy balance model based on the assumption of equal proportion. Its principle is to couple the water heat balance framework based on the assumption of equal proportion on the Priestley Taylor (PT) evapotranspiration algorithm. PEW model can consider the influence of water balance constraint and energy budget process at the same time, which makes the simulation accuracy of PEW model improved compared with previous models to a certain extent. The input data of PEW include the meteorological and soil moisture changes of ERA5 land dataset. The time span of this dataset is from 1982 to 2018. The time resolution is month by month and the spatial resolution is 0.1 °. This data set can provide a basis for studying the long-term water cycle and climate change.

2、Keywords

Theme：Evapotranspiration,Hydrology
Discipline：Terrestrial Surface
Places：Globe
Time：1982-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：10956.8MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：90.0 | - |
| west：-180.0 | - | east：180.0 |
| - | south：-60.0 | - |

5、Time frame:1981-12-31 16:00:00+00:00--2018-11-30 16:00:00+00:00

6、Reference method

References to data:

FU Jianyu , WANG Weiguang . Global PEW Land Evapotranspiration Data Set (1982-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2728742022

References to articles:

Fu, J., Wang, W., Shao, Q., Xing, W., Cao, M., Wei, J., Chen Z., & Nie, W. (2022). Improved global evapotranspiration estimates using proportionality hypothesis-based water balance constraints. Remote Sensing Environ. 279, 113140. https://doi.org/10.1016/j.rse.2022.113140

7、Supporting project information

8、Data resource provider

name: FU Jianyu
unit: Sun Yat-Sen University
email: fujy29@mail.sysu.edu.cn

name: WANG Weiguang
unit: Hohai University
email: wangweiguang006@126.com