A Big Earth Data Platform for Three Poles

**Evapotranspiration dataset of the Tibet Plateau at the monthly scale (1979-2018)**

1、Description

This data set includes evapotranspiration data set of the Tibet Plateau at the monthly scale from 1979 to 2018. The data set is based on the ERA5 net radiation and China meteorological forcing dataset (CMFD). The evapotranspiration is derived by the sigmoid generalized complementary equation, which is calibrated and verified by the observation data of 12 eddy flux sites and water balance data of 5 river basins (the source region of Yangtze river, the source region of Yellow River, the Nu River, the Yarlung Zangbo River, and the Hei River) on the Tibetan Plateau, which shows a high accuracy. The data set can be used to study the hydrological cycle and climate change in the Tibetan Plateau.

2、Keywords

Theme：Evapotranspiration,Evapotranspiration,Hydrology,Atmospheric Water Vapor
Discipline：Atmosphere,Terrestrial Surface
Places：Tibetan Plateau
Time：monthly, 1979-2018

3、Data details

1.Scale：None

2.Projection：

3.Filesize：109.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：40.0 | - |
| west：70.1 | - | east：110.0 |
| - | south：25.1 | - |

5、Time frame:1978-12-31 16:00:00+00:00--2018-12-31 03:59:59+00:00

6、Reference method

References to data:

MAHMUT Tudaji, CUI Tong, HAN Songjun, TIAN Fuqiang, LI Yukun, NAN Yi, LI Kunbiao, HU Yongzhao, WANG Liming, WANG Weiguang, CAO Xuejian. Evapotranspiration dataset of the Tibet Plateau at the monthly scale (1979-2018). A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2715852021

References to articles:

Wang, L.M., Han, S.J., Tian, F.Q., Li, K.B., Li, Y.K., Mahmut, T., Cao, X.J., Nan, Y., Cui, T., Hu, Z.Y., & Wang, W.G. (2022). The evaporation on the Tibetan Plateau stops increasing in the 21st century. Global and Planetary Change, In prepare.

Wang, L., Tian, F., Han, S., Cui, T., Meng, X., & Hu, H. (2021). Determination of the asymmetric parameter in complementary relations of evaporation in alpine grasslands of the Tibetan Plateau, J. Hydrol., 127306, https://doi.org/10.1016/j.jhydrol.2021.127306.

7、Supporting project information

Hydrological simulation and prediction

8、Data resource provider

name: LI Kunbiao
unit:
email: lkb18@mails.tsinghua.edu.cn

name: TIAN Fuqiang
unit:
email: tianfq@mail.tsinghua.edu.cn

name: WANG Liming
unit: Tsinghua University
email: wanglimingcau@163.com

name: HAN Songjun
unit:
email: hansj@iwhr.com

name: LI Yukun
unit:
email: 18301627339@163.com

name: MAHMUT Tudaji
unit:
email: 13141345346@163.com

name: CAO Xuejian
unit:
email: xxx

name: NAN Yi
unit:
email: ny1209@qq.com

name: CUI Tong
unit:
email: cuitong@mail.tsinghua.edu.cn

name: HU Yongzhao
unit:
email: huzy418@imde.ac.cn

name: WANG Weiguang
unit:
email: 20060069@hhu.edu.cn