A Big Earth Data Platform for Three Poles

**HiWATER：WATERNET observation dataset in the upper reaches of the Heihe River Basin (2013)**

1、Description

This data set includes the observation data of 40 water net sensor network nodes in Babao River Basin in the upper reaches of Heihe River since the end of June 2013. Soil moisture of 4cm, 10cm and 20cm is the basic observation of each node; 19 nodes include the observation of soil moisture and surface infrared radiation temperature; 11 nodes include the observation of soil moisture, surface infrared radiation temperature, snow depth and precipitation. The observation frequency is 5 minutes. The data set can be used for hydrological simulation, data assimilation and remote sensing verification.

2、Keywords

Theme：Soil,Surface radiation temperature,Precipitation,Snow depth,Snow,Earth SurFace Processes,Precipitation amount,Soil temperature,Soil moisture/Water content  
Discipline：Atmosphere,Terrestrial Surface,Cryosphere  
Places：Heihe River Basin, Babaohe Catchment  
Time：2013

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：517.0MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.3958 | - |
| west：100.0417 | - | east：101.2417 |
| - | south：37.6958 | - |

5、Time frame:2013-12-25 08:00:00+00:00--2015-07-17 08:00:00+00:00

6、Reference method

References to data:

MA Mingguo, LI Xin, KANG Jian. HiWATER：WATERNET observation dataset in the upper reaches of the Heihe River Basin (2013). A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.219.2014.db2015

References to articles:

Rui Jin, Xin Li, Baoping Yan, Xiuhong Li, Wanmin Luo, Minguo Ma, Jianwen Guo, Jian Kang, Zhongli Zhu. 2014. A Nested Eco-hydrological Wireless Sensor Network for Capturing Surface Heterogeneity in the Middle-reach of Heihe River Basin, China. IEEE Geoscience and Remote Sensing Letters, 11(11): 2015-2019, DOI:10.1109/LGRS.2014.2319085  
  
Che, T., Li, X., Liu, S., Li, H., Xu, Z., Tan, J., Zhang, Y., Ren, Z., Xiao, L., Deng, J., Jin, R., Ma, M., Wang, J., & Yang, X. (2019). Integrated hydrometeorological, snow and frozen-ground observations in the alpine region of the Heihe River Basin, China. Earth System Science Data, 11, 1483-1499

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)  
National Development and Reform Commission Project  
National High-tech R&D Program of China (863 Program)

8、Data resource provider

name: MA Mingguo  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: mmg@lzb.ac.cn  
  
name: LI Xin  
unit:   
email: xinli@itpcas.ac.cn  
  
name: KANG Jian  
unit:   
email: jinrui@lzb.ac.cn