A Big Earth Data Platform for Three Poles

**WATER: Dataset of automatic meteorological observations at the Huazhaizi desert station (2008-2011)**

1、Description

The dataset of automatic meteorological observations was obtained from Jun. 1, 2008 to Dec. 31, 2009 at the Huazhaizi desert station which is located in Anyangtan (E100°19'06.9″/N38°45'54.7″), south of Zhangye city, Gansu province,. The experimental area, situated in the middle stream of Heihe river, with a flat and open terrain and sparse vegetation cover is an ideal desert observing field.   
 Observation items included the multi-layer (2m and 10m) wind speed and direction, the air temperature, precipitation, the four components of radiation, the surface infrared temperature, the multi-layer soil temperature (5cm, 10cm, 20cm, 40cm, 80cm and 160cm), soil moisture (5cm, 10cm, 20cm, 40cm, 80cm and 160cm) and soil heat flux (5cm & 10cm).   
 The raw data were level0 and the data after basic processes were level1; the data after strict quality control were defined as Level2. The data files were named as follows: station+datalevel+AMS+datadate.. As for detailed information, please refer to “Meteorological and Hydrological Flux Data Guide".

2、Keywords

Theme：Soil,Precipitation,Radiation,Temperature,Winds,Visibility,Soil temperature,Wind direction,Soil moisture/Water content,Air temperature,Pressure,Soil heat flux  
Discipline：Atmosphere,Terrestrial Surface  
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches,   
Time：2008-2011

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：34.8MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.85 | - |
| west：100.24 | - | east：100.24 |
| - | south：38.85 | - |

5、Time frame:2008-06-18 08:00:00+00:00--2011-12-17 08:00:00+00:00

6、Reference method

References to data:

LI Xin, XU Ziwei. WATER: Dataset of automatic meteorological observations at the Huazhaizi desert station (2008-2011). A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0277.db2015

References to articles:

Liu, S.M., Xu, Z.W., Wang, W.Z., Bai, J., Jia, Z., Zhu, M., & Wang, J.M. (2011). A comparison of eddy-covariance and large aperture scintillometer measurements with respect to the energy balance closure problem. Hydrology and Earth System Sciences, 15(4), 1291-1306.  
  
Xu, T., Liu, S., Xu, L., Chen, Y., Jia, Z., Xu, Z., Nielson, J. (2015). Temporal Upscaling and Reconstruction of Thermal Remotely Sensed Instantaneous Evapotranspiration. Remote Sensing. 7(3), 3400-3425. doi:10.3390/rs70303400.

7、Supporting project information

The CAS (Chinese Academy of Sciences) Action Plan for West Development Project  
National Program on Key Basic Research Project (973 Program

8、Data resource provider

name: XU Ziwei  
unit: Beijing Normal University  
email: xuzw@bnu.edu.cn  
  
name: LI Xin  
unit:   
email: xinli@itpcas.ac.cn