A Big Earth Data Platform for Three Poles

**WATER: Dataset of automatic meteorological observations at the Yingke oasis station (2007-2011)**

1、Description

The dataset of automatic meteorological observations was obtained at the Yingke oasis station from Nov. 5, 2007 to Oct. 31, 2009. The observation site is located in an irrigation farmland in Yingke (E100°24′37.2″/N38°51′25.7″, 1519.1m), Zhangye city, Gansu province. The experimental area, situated in the middle stream Heihe river basin and with windbreaks space of 500m from east to west and 300m from south to north, is an ideal choice for its flat and open terrain.   
 Observation items were multilayer (2m and 10m) of the wind speed and direction, air temperature and humidity, air pressure, precipitation, four components of radiation; the surface infrared temperature; the multilayer soil temperature (10cm, 20cm, 40cm, 80cm, 120cm and 160cm), the soil moisture (10cm, 20cm, 40cm, 80cm, 120cm and 160cm), and soil heat flux (5cm & 15cm).   
 The raw data were level0 and the data after basic processes were level1, in which ambiguous ones were marked; the data after strict quality control were defined as Level2. The data files were named as follows: station+datalevel+AMS+datadate. Level2 or above were strongly recommended to domestic users. 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：

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：254.6MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.86 | - |
| west：100.41 | - | east：100.41 |
| - | south：38.86 | - |

5、Time frame:2007-11-20 16:00:00+00:00--2011-12-15 16:00:00+00:00

6、Reference method

References to data:

Zhang Zhihui. WATER: Dataset of automatic meteorological observations at the Yingke oasis station (2007-2011). A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0284.db2015

References to articles:

Li, X., Li, X.W., Li, Z.Y., Ma, M.G., Wang, J., Xiao, Q., Liu, Q., Che, T., Chen, E.X., Yan, G.J., Hu, Z.Y., Zhang, L.X., Chu, R.Z., Su, P.X., Liu, Q.H., Liu, S.M., Wang, J.D., Niu, Z., Chen, Y., Jin, R., Wang, W.Z., Ran, Y.H., Xin, X.Z., Ren, H.Z. (2009). Watershed Allied Telemetry Experimental Research. Journal of Geophysical Research, 114(D22103), doi:10.1029/2008JD011590.  
  
Liu, S.M., Li, X., Xu, Z.W., Che, T., Xiao, Q., Ma, M.G., Liu, Q.H., Jin, R., Guo, J.W., Wang, L.X., Wang, W.Z., Qi, Y., Li, H.Y., Xu, T.R., Ran, Y.H., Hu, X.L., Shi, S.J., Zhu, Z.L., Tan, J.L., Zhang, Y., & Ren, Z.G. (2018). The Heihe Integrated Observatory Network: A Basin-Scale Land Surface Processes Observatory in China. Vadose Zone Journal, 17(1), 180072. doi:10.2136/vzj2018.04.0072.

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: Zhang Zhihui  
unit:   
email: