A Big Earth Data Platform for Three Poles

**WATER: Dataset of automatic meteorological observations at the Dayekou Guantan forest station in the Dayekou watershed**

1、Description

The dataset of automatic meteorological observations was obtained at the Dayekou Guantan forest station (E100°15′/N38°32′, 2835m), south of Zhangye city, Gansu province, from Oct. 1, 2007 to Dec. 31, 2009. Guantan forest station was dominated by the 15-20m high spruce and the surface was covered by 10cm deep moss. All the vegetation was in good condition.  
 Observation items were the multilayer (2m and 10m) wind speed and direction, the air temperature and moisture, rain and snow gauges, snow depth, photosynthetically active radiation, four components of radiation from two layers (, 1.68m and 19.75 m), stem sap flow, the surface temperature, the multi-layer soil temperature (5cm, 10cm, 20cm, 40cm, 80cm and 120cm),soil moisture (5cm, 10cm, 20cm, 40cm, 80cm and 120cm) and soil heat flux (5cm & 15cm).  
 As for detailed information, please refer to Meteorological and Hydrological Flux Data Guide.

2、Keywords

Theme：Soil,Surface radiation temperature,Precipitation,Radiation,Temperature,Earth SurFace Processes,Winds,Visibility,Wind direction,Soil moisture/Water content,Pressure,Soil heat flux  
Discipline：Atmosphere,Terrestrial Surface  
Places：Heihe River Basin, Dayekou watershed foci experimental areas, Forest and Hydrology Experimental Areas,   
Time：

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：1756.8MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.53 | - |
| west：100.25 | - | east：100.25 |
| - | south：38.53 | - |

5、Time frame:2007-10-22 00:00:00+00:00--2011-12-21 11:10:00+00:00

6、Reference method

References to data:

Zhang Zhihui. WATER: Dataset of automatic meteorological observations at the Dayekou Guantan forest station in the Dayekou watershed. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0287.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

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