A Big Earth Data Platform for Three Poles

**HiWATER: Dataset of Soil freeze/thaw experiment observed in the midstream of the Heihe River Basin from Nov. 15 to Nov. 16, 2013**

1、Description

This data set includes the continuous observation data set of soil texture, roughness and surface temperature measured by the vehicle borne microwave radiometer on November 15-16, 2013 in the farmland of jiushe, Kangning, Zhangye City, Gansu Province. The surface temperature includes the soil temperature data observed by the temperature sensor at the soil depth of 0 cm, 1 cm, 3 cm, 5 cm and 10 cm. The time frequency of conventional observation of soil temperature is 5 minutes.   
Data details:   
1. Time: November 15-16, 2013   
2. data:   
Bright temperature: observed by vehicle mounted multi frequency passive microwave radiometer, including 6.925, 18.7 and 36.5ghz v-polarization and H-polarization data (10.65ghz band instrument damaged)   
Soil temperature: use the sensor installed on dt85 to measure the soil temperature of 0cm, 1cm, 3cm, 5cm and 10cm   
Soil texture: soil samples measured in Beijing Normal University   
Soil roughness: measured by roughness meter provided by northeast geography   
3. Data size: 4.8m   
4. Data format:. Xls

2、Keywords

Theme：Soil,Soil temperature,Remote Sensing Technology,Microwave radiometer  
Discipline：Terrestrial Surface,Remote Sensing Technology  
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches,   
Time：2013, 2013-11-15 to 2013-11-16

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：4.8MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.53 | - |
| west：100.89 | - | east：100.89 |
| - | south：39.53 | - |

5、Time frame:2013-11-23 00:00:00+00:00--2013-11-24 00:00:00+00:00

6、Reference method

References to data:

MA Mingguo, ZHAO Shaojie, YE Qinyu, KOU Xiaokang. HiWATER: Dataset of Soil freeze/thaw experiment observed in the midstream of the Heihe River Basin from Nov. 15 to Nov. 16, 2013. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.274.2015.db2017

References to articles:

Li, X., Liu, S.M., Xiao, Q., Ma, M.G., Jin, R., Che, T., Wang, W.Z., Hu, X.L., Xu, Z.W., Wen, J.G., Wang, L.X. (2017). A multiscale dataset for understanding complex eco-hydrological processes in a heterogeneous oasis system. Scientific Data, 4, 170083. doi:10.1038/sdata.2017.83.

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)

8、Data resource provider

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