A Big Earth Data Platform for Three Poles

**WATER：Dataset of Soil freeze/thaw experiment Observed in the upper reaches of the Heihe River Basin from Nov. 10 to Nov. 14, 2013**

1、Description

This data set includes the continuous observation data set of light temperature and surface temperature and humidity measured by the vehicle borne microwave radiometer from November 10 to 14, 2013 in aroucaochang, arouxiang, Qilian County, Qinghai Province. The surface temperature and humidity include six layers of temperature sensor at the soil depth of 1cm, 3cm, 5cm, 10cm, 15cm, 20cm and six layers of humidity sensor at the soil depth of 0-5cm. The time frequency of routine observation of soil temperature and humidity is 5 minutes.   
Data details:   
1. Time: November 10-14, 2013   
2. data:   
Brightness temperature: observed by vehicle mounted multi frequency passive microwave radiometer, including 6.925, 10.65, 18.7 and 36.5ghz V polarization and H polarization data   
Soil temperature: use the sensor installed on dt80 and dt85 to measure the soil temperature of 1cm, 5cm, 10cm, 20cm, and 1cm, 3cm, 5cm, 10cm, 15cm, which is measured by the sensor connected to dt80   
Soil moisture: use h-probe sensor to measure 0-5cm soil moisture, the probe can measure 0-5cm soil temperature at the same time   
3. Data size: 16.7M   
4. Data format:. Xls

2、Keywords

Theme：Soil,Soil temperature,Remote Sensing Technology,Microwave radiometer,Soil moisture/Water content  
Discipline：Terrestrial Surface,Remote Sensing Technology  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, A’rou,   
Time：2013-11-10 to 2013-11-14, 2013

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：16.7MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.27 | - |
| west：100.88 | - | east：100.88 |
| - | south：38.27 | - |

5、Time frame:2014-05-27 00:00:00+00:00--2014-05-31 00:00:00+00:00

6、Reference method

References to data:

MA Mingguo, ZHAO Shaojie, YE Qinyu, KOU Xiaokang. WATER：Dataset of Soil freeze/thaw experiment Observed in the upper reaches of the Heihe River Basin from Nov. 10 to Nov. 14, 2013. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.273.2015.db2015

References to articles:

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)

8、Data resource provider

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