A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurement synchronizing with the airborne microwave radiometers (L&K bands) mission in the Biandukou foci experimental area on May 25, 2008**

1、Description

The dataset of ground truth measurement synchronizing with the airborne microwave radiometers (L&K bands) mission was obtained in the Biandukou foci experimental area on May 25, 2008. Observation items included:  
 (1) the soil temperature in L1, L2, L3, L4, L5, L6 and L7;  
 (2) roughness measured by the roughness grid board and collected by the digital camera. Files with "result" field were processed data, in which the first row was RMS height (cm; one value), the second row was distance (cm), and the third row was correlation function (cm; changed into correlation length when it is 1/e).   
 (3) GPR and TDR data.  
 Five files were included, roughness photos and preprocessed data, the soil temperature, coordinates of quadrates and sampling lines, GPR and microwave radiometer data. All were archived as Excel and .txt files. Those provide reliable ground data for development and validation of soil moisture and freeze/thaw algorithms from active remote sensing approaches.

2、Keywords

Theme：Gravity,Soil,Surface Roughness,Soil temperature,Remote Sensing Technology,Ground penetration radar,Microwave radiometer,Soil moisture/Water content  
Discipline：Terrestrial Surface,Remote Sensing Technology,Solid earth  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, closed observation area of Biandoukou  
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：924.1MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.312 | - |
| west：100.881 | - | east：101.036 |
| - | south：38.192 | - |

5、Time frame:2008-06-11 08:00:00+00:00--2008-06-11 08:00:00+00:00

6、Reference method

References to data:

PATRICK Klenk, QIAN Yonggang, DU Ziqiang, HUANG Bo, HAO Xiaohua, CAO Yongpan, CHANG Sheng, BAI Yunjie, LI Shihua, WU Yueru, CHAI Yuan, ZHENG Yue, LI Xiaoyu, WANG Zhixia, LUO Zhen, YAO Dongping, SUN Xiaoqing, CHE Tao, WANG Jindi, ZHAO Shaojie, ZHAO Yingshi. WATER: Dataset of ground truth measurement synchronizing with the airborne microwave radiometers (L&K bands) mission in the Biandukou foci experimental area on May 25, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0040.db2013

References to articles:

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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