A Big Earth Data Platform for Three Poles

**WATER: Dataset of surface roughness measurements in the Biandukou foci experimental area during the Pre-observation Period**

1、Description

The dataset of surface roughness measurements was obtained in No. 1 and 2 quadrates of the Biandukou foci experimental area during the pre-observation period. Both the quadrates were divided into 3×3 subsites, with each one spanning a 30×30 m2 plot. The original photos of each sampling point, surface height standard deviation (cm) and correlation length (cm) were included. With the roughness grid board 110cm long and the measuring intervals of 1cm, the samples were collected along the soil surface from south to north and from east to west, respectively.  
 The coordinates of sample points would be got with the help of ArcView; and after geometric correction, surface height standard deviation (cm) and correlation length (cm) could be acquired based on the formula listed on pages 234-236, Microwave Remote Sensing, Vol. II.  
 The roughness data files were initialized by the sample name, which was followed by the serial number, the name of the file, standard deviation and correlation length. Each .txt file is matched with one sample photo and standard deviation and correlation length represent the roughness. In addition, the length of 101 needles is also included for further checking.  
 Those provide reliable ground data for improving and verifying the microwave remote sensing algorithms.

2、Keywords

Theme：Gravity,Surface Roughness  
Discipline：Solid earth  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, closed observation area of Biandoukou  
Time：2007,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：197.7MB

4.Data format：EXCEL

4、Space scope

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

5、Time frame:2007-10-31 16:00:00+00:00--2007-10-31 16:00:00+00:00

6、Reference method

References to data:

WU Yueru. WATER: Dataset of surface roughness measurements in the Biandukou foci experimental area during the Pre-observation Period. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0186.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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