A Big Earth Data Platform for Three Poles

**WATER: Dateset of surface roughness measurements in the A'rou foci experimental area**

1、Description

The dataset of surface roughness measurements was obtained in A1, A2, A3, L1, L2, L3, L4, L5 and L6 of the A'rou foci experimental area. The quadrates were changed into 3×3 subsites during the foci experimental period, with each one spanning a 30×30 m2 plot. With the roughness plate 110cm long and the measuring points distance 1cm, the samples were collected along the strip from south to north and from east to west, respectively. As for the sampling lines, the samples were collected every 100 m along them from south to north. Photos were named in the form of A3-1EW, indicating No. 1 point in A3 measured from east to west.  
 The coordinates of the sample 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 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 radius is also included for further checking.  
 Those provide reliable ground data for improving and verifying the remote sensing algorithms.  
 Nine files were included, ARou\_SampleArea1, ARou\_SampleArea2, ARou\_SampleArea3, ARou\_SampleLine1, ARou\_SampleLine2, ARou\_SampleLine3, ARou\_SampleLine4, ARou\_SampleLine5 and ARou\_SampleLine6.

2、Keywords

Theme：Gravity,Surface Roughness  
Discipline：Solid earth  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches, A'rou flight zone  
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：649.6MB

4.Data format：JPG

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.078 | - |
| west：100.411 | - | east：100.55 |
| - | south：38.015 | - |

5、Time frame:2008-03-28 16:00:00+00:00--2008-03-28 16:00:00+00:00

6、Reference method

References to data:

WANG Shuguo. WATER: Dateset of surface roughness measurements in the A'rou foci experimental area. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0022.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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