A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements synchronizing with Envisat ASAR in the E'bao foci experimental area on Oct. 18, 2007 during the pre-observation period**

1、Description

The dataset of ground truth measurements synchronizing with Envisat ASAR was obtained in No. 1 and 2 quadrates of the E'bao foci experimental area on Oct. 18, 2007 during the pre-observation period.   
 The data were in AP mode and VV/VH polarization combinations, and the overpass time was approximately at 11:17 BJT (Beijing Time). Both the quadrates were divided into 3×3 subsites, with each one spanning a 30×30 m2 plot. 25 sampling points were chosen, including centers and corners.  
 Simultaneous with the satellite overpass, numerous ground data were collected, soil volumetric moisture, soil conductivity, the soil temperature, and the real part of soil complex permittivity by the WET soil moisture tachometer; the surface radiative temperature by the hand-held infrared thermometer; soil gravimetric moisture, volumetric moisture, and soil bulk density by drying soil samples from the cutting ring (100cm^3). Meanwhile, vegetation parameters as height, coverage and water content were also observed. Surface roughness was detailed in the "WATER: Surface roughness dataset in the A'rou foci experimental area".  
 Those provide reliable ground data for retrieval and verification of soil moisture, soil freeze/thaw status and the microwave radiative transfer model from active remote sensing approaches.

2、Keywords

Theme：Soil,Surface radiation temperature,Earth SurFace Processes,Soil temperature,Soil moisture/Water content,Terrestrial Surface Remote Sensing,Ground verification information  
Discipline：Terrestrial Surface  
Places：Heihe River Basin, the cold region hydrology experimental area in the upper reaches,   
Time：2007,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.08MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.014 | - |
| west：100.703 | - | east：100.76 |
| - | south：37.984 | - |

5、Time frame:2007-11-01 08:00:00+00:00--2007-11-01 08:00:00+00:00

6、Reference method

References to data:

WU Yueru. WATER: Dataset of ground truth measurements synchronizing with Envisat ASAR in the E'bao foci experimental area on Oct. 18, 2007 during the pre-observation period. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0043.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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