A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements synchronizing with MODIS, ALOS PALSAR and AMSR-E in the Biandukou foci experimental area on May 24, 2008**

1、Description

The dataset of ground truth measurements synchronizing with MODIS, ALOS PALSAR and AMSR-E was obtained in the Biandukou foci experimental area on May 24, 2008. Observation items included:  
 (1) the surface temperature in No. 1 (grassland), No. 2 (the rape land), No. 3 (the rape land), No. 4 (the wheat land) and No. 5 quadrate (wheat and rape);  
 (2) the soil moisture by WET in No. 2 quadrate;  
 (3) GPR and WET;  
 (4) The spectrum by ASD Fieldspec FRTM (Boulder, Co, USA), 350nm-2500nm, 3nm for the visible near-infrared band and 10nm for the shortwave infrared band). The spectrum data were archived in the ASCII format, with the first five rows as the file header and the following two columns as wavelength (nm) and reflectance (percentage) respectively, and can be opened by .txt or wordpad. The .txt file was not reflectance but intermediate file for further calculation. Raw data were binary files direct from ASD (by ViewSpecPro). The surface radiative temperature and the physical temperature were measured by the handheld infrared thermometer. Besides, the cover type was also recorded. The data can be opened by Microsoft Office. Soil moisture was acquired by WET and the cutting ring. The data can be opened by Microsoft Office.  
 Six data files were included, soil moisture, the surface temperature, GPR, coverage photos and preprocessed data, ground objects spectrum and satellite images.

2、Keywords

Theme：Soil,Surface radiation temperature,Ground object spectral,Terrain spectrometer,Vegetation,Earth SurFace Processes,Vegetation cover,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, closed observation area of Biandoukou  
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：837.3MB

4.Data format：

4、Space scope

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

5、Time frame:2008-06-09 16:00:00+00:00--2008-06-09 16:00:00+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, LI Xiaoyu, ZHENG Yue, WANG Zhixia, LUO Zhen, YAO Dongping, SUN Xiaoqing, CHE Tao, WANG Jindi, ZHAO Shaojie, ZHAO Yingshi. WATER: Dataset of ground truth measurements synchronizing with MODIS, ALOS PALSAR and AMSR-E in the Biandukou foci experimental area on May 24, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0041.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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