A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements synchronizing with ASTER in the Linze station foci experimental area on May 28, 2008**

1、Description

The dataset of ground truth measurements synchronizing with ASTER was obtained in the Linze station foci experimental area on May 28, 2008. Observation items included:
 (1) soil moisture (0-5cm) measured once by the cutting ring method at the corner points of the 40 subplots of the west-east desert transit zone strip once by cutting ring method in the corner points of nine subplots of the north-south desert transit zone, once by the cutting ring method and once by ML2X Soil Moisture Tachometer in the center points of nine subplots of the farmland. The preprocessed soil volumetric moisture data were archived as Excel files.
 (2) surface radiative temperature measured by the handheld infrared thermometer (5# and 6# from Cold and Arid Regions Environmental and Engineering Research Institute which were both calibrated) in 40 subplots of the west-east desert transit zone strip (repeated 14-30 times), and nine subplots of the north-south desert transit zone strip (repeated 12-30 times). Data were archived as Excel files.
 (3) BRDF of maize and desert scrub measured by ASD Spectroradiometer (350～2 500 nm) from BNU, the 40% reference board , two observation platforms of BNU make and one of Institute of Remote Sensing Applications make in Wulidun farmland quadrates and the desert transit zone strips. Raw spectral data were archived as binary files, which were recorded daily in detail, and pre-processed data on reflectance and transmittivity were archived as text files (.txt).
 (4) LAI measured by two methods in the the Wulidun farmland quadrates and Linze station quadrates. One is manual method. The LAI, plant height and the spacing of selected samples were measured by the ruler and the number of the sapmles in the quadrate were counted. Then the LAI can be calculated. The other method is LI-3100. Data were archived as Excel files.

2、Keywords

Theme：Soil,Surface radiation temperature,Leaf area index,Terrain spectrometer,Vegetation,Emissivity,Biomass,Earth SurFace Processes,Soil moisture/Water content,Terrestrial Surface Remote Sensing
Discipline：Terrestrial Surface
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches, Closed observation area of Linze station
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：14.0MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.379 | - |
| west：100.11 | - | east：100.201 |
| - | south：39.311 | - |

5、Time frame:2008-06-12 16:00:00+00:00--2008-06-12 16:00:00+00:00

6、Reference method

References to data:

Qian Jinbo, WANG Zhixia, LI Jing, Qu Yonghua, PAN Xiaoduo, SONG Yi, Li Xiangyun, SUN Qingsong, WANG Yang. WATER: Dataset of ground truth measurements synchronizing with ASTER in the Linze station foci experimental area on May 28, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0099.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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