A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements synchronizing with PROBA CHRIS in the Biandukou foci experimental area on Jun. 22, 2008**

1、Description

The dataset of ground truth measurements synchronizing with PROBA CHRIS was obtained in the Biandukou foci experimental area on Jun. 22, 2008. Observation items included:  
 (1) quadrates investigation including GPS by GARMIN GPS 76, species by manual cognition, the plant number by manual work, the height by the measuring tape repeated 4-5 times, the chlorophyll content by SPAD 502, the coverage by manual work and the biomass (samples from 0.5m×0.5m) by wet weight and dry weight. Data were archived as Excel files.   
 (2) LAI of maize, desert scrub and the poplar by the fisheye camera (CANON EOS40D with a lens of EF15/28), shooting straight downwards, with exceptions of higher plants, which were shot upwards. Data included original photos (.JPG) and those processed by can\_eye5.0 (as Excel files). For more details, see Readme file.  
 (3) ground object spectrum of grassland, barley and the rape by ASD FieldSpec (350～2 500 nm) from BNU, with 20% reference board. Raw data were binary files direct from ASD (by ViewSpecPro), which were recorded daily in detail, and pre-processed data on reflectance were in .txt.  
 (4) BRDF of grassland, barley and the rape by ASD FieldSpec (350～2 500 nm), with 20% reference board. Raw data were binary files direct from ASD (by ViewSpecPro), which were recorded daily in detail. The processed reflectance and transmittivity were archived in .txt files.  
 The dataset includes processed spectrum data, soil moisture, BRDF, quadrates investigation, integrating spheres data on the rape, LAI, CHRIS data and the fisheye camera data.

2、Keywords

Theme：Leaf area index,Ground object spectral,Terrain spectrometer,Vegetation,Chlorophyll,Biomass,Vegetation cover,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：158.9MB

4.Data format：EXCEL

4、Space scope

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

5、Time frame:2008-07-07 00:00:00+00:00--2008-07-07 00:00:00+00:00

6、Reference method

References to data:

HAO Xiaohua. WATER: Dataset of ground truth measurements synchronizing with PROBA CHRIS in the Biandukou foci experimental area on Jun. 22, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0039.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

name: HAO Xiaohua  
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences  
email: haoxh@lzb.ac.cn