A Big Earth Data Platform for Three Poles

**WATER: Dataset of spectral reflectance observations in the Yingke oasis and Huazhaizi desert steppe foci experimental areas**

1、Description

The dataset of spectral reflectance observations was obtained by ASD (Analytical Sepctral Devices) in the Yingke oasis and Huazhaizi desert steppe foci experimental areas. Reflectance was calculated based on the equation R = (DN1/DN0)×R0, DN1 indicating DN of the targets, R0 and DN0 the reflectance and DN of the grey board.  
 The reflectance spectra of maize and wheat canopy, the component leaf of the maize and BRDF in Yingke oasis maize field, Yingke oasis wheat field, Huazhaizi desert maize field, the transect spectrum in Huazhaizi desert No. 1 and 2 plots and Linze and Biandukou foci experimental area were measured on May 20, 24, 25, 28 and 30, Jun. 1, 4, 9, 14, 16, 18, 20, 22, 23, 24, 26, 29 and 30, Jul. 1, 4, 5, 6, 7, 9 and 11, 2008. Four ASD devices were used, from Peking University (350-2500nm), Institute of Remote Sensing Applications (350-2500nm), Beijing Academy of Agriculture and Forestry Sciences (350-1065nm) and BNU respectively. The reference boards were 40%, 50% and 99%.   
 The above spectral reflectance dataset was synchronizing with WiDAS (Wide-angle Infrared Dual-mode line/area Array Scanner), OMIS-II and various spaceborne sensors.  
Raw data were binary files direct from ASD (by ViewSpecPro), and pre-processed data on reflectance were in Excel format.

2、Keywords

Theme：Canopy spectrum,Reflectivity,Terrain spectrometer,Vegetation,Terrestrial Surface Remote Sensing,Ground verification information,Canopy reflectance  
Discipline：Terrestrial Surface  
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches, closed observation area of Biandoukou,   
Time：2008-05-25, 2008-06-30, 2008-07-04, 2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：1854.0MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.286 | - |
| west：100.037 | - | east：101.036 |
| - | south：38.192 | - |

5、Time frame:2008-06-08 16:00:00+00:00--2008-08-01 16:00:00+00:00

6、Reference method

References to data:

ZHOU Hongmin, YAN Guangkuo, FAN Wenjie, YANG Tianfu, YANG Guijun, ZHOU Chunyan, XIA Chuanfu, REN Huazhong, YAN Binyan, WANG Haoxing, ZHANG Yang, CHEN Ling, SU Gaoli, LIU Sihan, Liu Liangyun, GUANG Jie, YAO Yanjuan, GE Yingchun, SHU Lele, TAO Xin, Wen Jianguang, XIAO Yueting, CHENG Zhanhui, LI Xin. WATER: Dataset of spectral reflectance observations in the Yingke oasis and Huazhaizi desert steppe foci experimental areas. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0217.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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