A Big Earth Data Platform for Three Poles

**WATER: Dataset of albedo observations in the arid region hydrology experiment area**

1、Description

The dataset of albedo observations was obtained by the shortwave radiometer (1#: CMP3-060580 and 2#: CMP3-060584 from Institute of Remote Sensing Applications) in the arid region hydrology experiment area from May 20 to Jul. 14, 2008. The dataset of ground truth measurement was synchronizing with WiDAS (Wide-angle Infrared Dual-mode line/area Array Scanner), OMIS-II, Landsat TM, ASTER, Hyperion and CHRIS. Observation items included:  
 (1) Albedo in Yingke oasis and Huazhaizi desert steppe foci experimental area. Yingke maize field was measured on May 28 and 30, Jun. 3, 16, 20, 27 and 29, Jul. 11 and 14, 2008, Yingke wheat field on May 20 and 29, Jun. 1, 4, 6, 9, 15 and 24, Jul. 7 and 14, 2008, Huazhaizi desert No. 2 plot on Jun. 14, 22 and 30, 2008 and the flax field on Jun. 23, 2008.  
 (2) Albedo in Linze foci experimental area. Maize was measured on May 25, 2008 and desert and alfalfa on May 24, 2008.  
 (3) Albedo in Biandukou foci experimental area. The rape field, the grassland and the barley were measured on Jun. 24, 2008, and barley on Jul. 6, 2008.  
 (4) Zhangye intensive experimental area. The intra-city grassland and the roof of Jingdu Hotel were measured on May 27, 2008.  
 Besides the shortwave radiometer, the digital multimeter (UNIT) was also used for voltage measuring.  
 Raw data were archived in paper forms and Excel after input into the computer.  
 Besides, shorter plants were chosen for measurements as the platform was not high enough. And the distance between the probe and the plant was shorter during the later observation period.

2、Keywords

Theme：Earth SurFace Processes,Image spectrometer OMIS-II,Remote Sensing Technology,Wide-angle infrared dual-mode line/Area array scanner,Visible remote sensing,Albedo  
Discipline：Terrestrial Surface,Remote Sensing Technology  
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches, Zhangye City Foci Experimental Area, Closed observation area of Linze station, closed observation area of Biandoukou,   
Time：2008-06-27, 2008-05-25, 2008-07-14, 2008-06-30, 2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：230.4MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.311 | - |
| west：100.11 | - | east：101.036 |
| - | south：38.192 | - |

5、Time frame:2008-05-31 16:00:00+00:00--2008-07-25 16:00:00+00:00

6、Reference method

References to data:

SU Gaoli, ZHOU Mengwei. WATER: Dataset of albedo observations in the arid region hydrology experiment area. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0147.db2013

References to articles:

Liu SH, Liu Q, Liu QH, Wen JG, Li XW. The angular and spectral kernel model for BRDF and albedo retrieval. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2010, 3(3): 241-256. 10.1109/JSTARS.2010.2048745.

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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