A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurement synchronizing with PROBA CHRIS in the Yingke oasis and Huazhaizi desert steppe foci experimental areas on Jun. 22, 2008**

1、Description

The dataset of ground truth measurement synchronizing with PROBA CHRIS was obtained in the Yingke oasis and Huazhaizi desert steppe foci experimental areas on Jun. 22, 2008. Observation items included:
 (1) Albedo by the shortwave radiometer in Huazhaizi desert No. 2 plot. R =10H (R for FOV radius; H for the probe height). Data were archived in Excel format.
 (2) BRDF of maize in Yingke oasis maize field by ASD (350-2 500 nm) from Beijing University and the observation platform of BNU make. The maximum height of the platform was 5m above the ground with the azimuth 0~360° and the zenith angle -60°~60°; BRDF in Huazhaizi desert No. 2 plot by ASD from Institute of Remote Sensing Applications (CAS) and the observation platform of its own make, whose maximum height was 2m above the ground with the zenith angle -70°~70°. Raw data were binary files direct from ASD (by ViewSpecPro), and pre-processed data on reflectance were in Excel format.
 (3) Atmospheric parameters in Huazhaizi desert No. 2 plot by CE318 (produced by CIMEL in France). The total optical depth, aerosol optical depth, Rayleigh scattering coefficient, column water vapor in 936 nm, particle size spectrum and phase function were then retrieved from these observations. The optical depth in 1020nm, 936nm, 870nm, 670nm and 440nm were all acquired by CE318. Those data include the raw data in .k7 format and can be opened by ASTPWin. ReadMe.txt is attached for detail. Processed data (after retrieval of the raw data) in Excel format are on optical depth, rayleigh scattering, aerosol optical depth, the horizontal visibility, the near surface air temperature, the solar azimuth, zenith, solar distance correlation factors, and air column mass number.

2、Keywords

Theme：Radiation,Ground object spectral,Vegetation,Aerosol,Albedo,Aerosol optical depth/Thickness,Terrestrial Surface Remote Sensing,Ground verification information,Atmospheric Water Vapor
Discipline：Atmosphere,Terrestrial Surface
Places：Heihe River Basin, Arid Region Hydrology in the Middle Reaches,
Time：2008,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：195.1MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.88 | - |
| west：100.289 | - | east：100.46 |
| - | south：38.734 | - |

5、Time frame:2009-01-04 08:00:00+00:00--2009-01-04 08:00:00+00:00

6、Reference method

References to data:

ZHOU Chunyan. WATER: Dataset of ground truth measurement synchronizing with PROBA CHRIS in the Yingke oasis and Huazhaizi desert steppe foci experimental areas on Jun. 22, 2008. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0129.db2014

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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