A Big Earth Data Platform for Three Poles

**WATER: Dataset of setting of the sampling plots and stripes in the Yingke oasis and Huazhaizi desert steppe foci experimental areas**

1、Description

The dataset focuses on the distribution of sampling plots and stripes in the Yingke oasis and Huazhaizi desert steppe foci experimental areas.  
 (1) YKLZYMD-the maize field plot (180m×180m) at Yingke Weather Station  
 It matches No. 10 flight route. Five subplots were selected, including three maize subplots and 2 wheat subplots. The maize subplots, labeled as YKLZYMD01, YKLZYMD02 and YKLZYMD03, were planted in different directions with a ridge sturctrue, which was composed of single row of maizes and bare soils. The distance of adjacent maize rows, as well as the width of bare soil was 0.5m . YKLZYMD05 (2.46m×1m, along the ridge) was located in the northwest of the plot and interplanted with wheat and soy bean. YKLZYMDD06 was exclusively wheat, and 10 rows (1.5m) vertical to the ridge and 1m along the ridge were measured.  
 This is a key experimental area for canopy spectrum, component reflectance spectra, BRDF, albedo, the photosynthetic rate, FPAR, structural parameters, vegetation coverage, the radiative temperature, surface emissivity, atmospheric parameters and soil moisture.  
 (2) YKXMD-Yingke wheat plot (180m×170m)  
 It matches No. 11 flight route. Wheat and maize were interplanted. Three subplots with the same size (3.4m \* 3.4m) were selected for the measurement of vegetaion structural parameters, BRDF, the radiative temperature, vegetation coverage and soil moisture.  
 (3) HZZHMZYMD-Huazhaizi maize plot (240m×240m)  
 It is located between No. 9 and No. 10 flight routes. The maize seed dominates, and wheat, alfalfa and tomatoes were planted. 4 maize subplots and one wheat subplot were chosen to collect the canopy temperature, spectrum, structural parameters and vegetation coverage.  
 (4) HZZHMYD1-Huazhaizi desert No. 1 plot (240m×240m)  
 It is located within No. 4 flight route. 3 subplots (30m×30m) were chosen for reflectance spectra, BRDF, vegetation coverage, emissivity, the radiative temperature, soil moisture, atmospheric parameters by sunphotometer CE318 and surface roughness.  
 In cooperation with experiments in Huazhaizi desert plots and Yingke weather station, simultaneous airborne multiangular thermal infrared camera&CCD-ground observations, simultaneous airborne hyperspectral imager (OMIS)-ground observations, simultaneous OMIS/TM/ASTER/Hyperion/CHRIS/ASAR-ground observations were all accomplished.  
 (5) HZZHMYD2-Huazhaizi desert No. 2 plot  
 It matches No. 5 flight route. Three subplots (10m×10m) for coverage and the radiative temperature and one (30m×30m) for simultaneous temperature and spectrum were chosen.  
 (6) HZZHMYD3-Huazhaizi desert No. 3 plot (30m×30m)  
 It is an intensive plot without simultaneous airporne or spaceborne measurement.  
 (7) DJCYMYD-the maize field at the resort  
 It is an intensive plot (30m×30m) with the maize seeds, mainly for the measurement of radiative temperature and soil moisture.  
 (8) DJCDMD-the barley field at the resort  
 It is mainly for radiative temperature data.  
 (9) DJCDBC-the calibration field at the resort  
 It is located at the ICBC resort. The reflectance spectra of the basketball court, the pool and the vegetation were collected used for radiative calibration of CCD camera in visible and near infrared spectra range.  
 The dataset also includes geographic infomation of each sample point.

2、Keywords

Theme：Sampling stripes,Terrestrial Surface Remote Sensing  
Discipline：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：5.5MB

4.Data format：

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.866101 | - |
| west：100.303934 | - | east：100.421831 |
| - | south：38.753043 | - |

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

6、Reference method

References to data:

YAN Guangkuo, Liu Qiang. WATER: Dataset of setting of the sampling plots and stripes in the Yingke oasis and Huazhaizi desert steppe foci experimental areas. A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0276.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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