A Big Earth Data Platform for Three Poles

**HiWATER: Dataset of the spectral reflectance in the middle of Heihe River Basin**

1、Description

This dataset contains the spectra of white cloth and black cloth obtained in the simultaneous time during the airborn remote sensing which supports the airboren data preprocessing as CASI, SASI and TASI , and the spetra of the typical targets in the middle reaches of the Heihe River Basin.

Instruments: SVC-HR1024 from IRSA, ASD Field Spec 3 from CEODE, Reference board
Measurement method: the spectra radiance of the targets are vertically measured by the SVC or ASD; before and after the target, the spectra radiance of the reference board is measured as the reference.
This dataset contains the spectra recorded by the SVC-HR1024 ( in the format of .sig which can be opened by the SVC-HR1024 software or by the notepad ) and the ASD (in the format of .asd), the observation log (in the format of word or excel), and the photos of the measured targets.

Observation time:
15-6-2012, the spectra of typical targets in the EC matrix using SVC
16-6-2012, the spectra of typical targets in the wetland by SVC
29-6-2012, the spectra of typical vegetation and soil in Daman site and Gobi site by ASD 29-6-2012, the spectra of white cloth and black cloth by ASD which is simultaneous with the airborne CASI data
30-6-2012, the spectra of vegetation and soil in the desert by ASD
5-7-2012, the spectra of white cloth and black cloth by ASD which is simultaneous with the airborne CASI data
7-7-2012, the spectra of corn in the Daman site for the research of daily speral variation.
8-7-2012, the spectra of white cloth and black cloth by ASD which is simultaneous with the airborne CASI data
8-7-2012, the spectra of corn in the Daman site by ASD for the research of daily speral variation
9-7-2012, the spectra of corn in the Daman site by ASD for the research of daily speral variation
10-7-2012, the spectra of corn in the Daman site by ASD for the research of daily speral variation
11-7-2012, the spectra of corn in the Daman site by ASD for the research of daily speral variation.
The time used in this dataset is in UTC+8 Time.

2、Keywords

Theme：Radiation,Terrain spectrometer,Object spectral,Reflectance,Terrestrial Surface Remote Sensing
Discipline：Atmosphere,Terrestrial Surface
Places：Heihe River Basin, the artificial oasis experimental area in the middle reaches, Zhangye wetland station, huazhaizi desert steppe station, Shenshawo desert station, Bajitan Gobi desert station, Daman Superstation
Time：2012-07-07, 2012-07-08, 2012-07-10, 2012-07-11, 2012, 2012-06-29, 2012-07-05, 2012-06-16, 2012-06-30, 2012-07-09, 2012-06-15

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：65.0MB

4.Data format：文本

4、Space scope

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

5、Time frame:2012-07-02 01:45:00+00:00--2012-07-28 01:45:00+00:00

6、Reference method

References to data:

XIAO Qing. HiWATER: Dataset of the spectral reflectance in the middle of Heihe River Basin. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.037.2013.db2017

References to articles:

Li, X., Liu, S.M., Xiao, Q., Ma, M.G., Jin, R., Che, T., Wang, W.Z., Hu, X.L., Xu, Z.W., Wen, J.G., Wang, L.X. (2017). A multiscale dataset for understanding complex eco-hydrological processes in a heterogeneous oasis system. Scientific Data, 4, 170083. doi:10.1038/sdata.2017.83.

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)
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8、Data resource provider

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