A Big Earth Data Platform for Three Poles

**WATER: Dataset of ground truth measurements synchronizing with Landsat TM in the Linze grassland and Linze station foci experimental area during the pre-observation period (on Sep. 23, 2007)**

1、Description

The dataset of ground truth measurements synchronizing with Landsat TM was obtained in the Linze grassland and Linze station foci experimental area on Sep. 23, 2007 during the pre-observation periods, and one scene was captured well. These data can provide reliable ground data for retrieval and validation of land surface temperatures with EO-1 Hyperion remote sensing approaches.
 Observation items included:
 (1) the land surface radiative temperature by the hand-held infrared thermometer, which was calibrated;
 (2) GPS by GARMIN GPS 76;
 (3) atmospheric parameters at Daman Water Management office measured 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. These data include the raw data in .k7 format and can be opened by ASTPWin software. ReadMe.txt is attached for detail. Processed data (after retrieval of the raw data) in Excel contain 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.
 (4) ground-based land surface temperature measurements by the thermal imager in the Heihe gobi, west of Zhangye city.

2、Keywords

Theme：Surface radiation temperature,Earth SurFace Processes,Aerosol,Remote Sensing Technology,Aerosol optical depth/Thickness,Aerosol backscatter,Visible remote sensing,Solar spectrophotometer
Discipline：Atmosphere,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,
Time：2007,

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：99.4MB

4.Data format：EXCEL

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：39.379496 | - |
| west：100.110909 | - | east：100.201591 |
| - | south：39.311923 | - |

5、Time frame:2007-10-06 00:00:00+00:00--2007-10-06 00:00:00+00:00

6、Reference method

References to data:

LI Hua, FANG Li, BAI Yunjie, PAN Xiaoduo, WU Yueru, YAN Yeqing, DING Songchuang, LI Zhe, Liu Qiang, GAO Song, CHE Tao, LIANG Ji, Wen Jianguang, HAN Xujun, ZHANG Lingmei, YAN Qiaodi, MA Hongwei, WANG Xufeng, RAN Youhua, LI Xin, YUAN Xiaolong, LI Hongyi, QIN Chun, HAO Xiaohua. WATER: Dataset of ground truth measurements synchronizing with Landsat TM in the Linze grassland and Linze station foci experimental area during the pre-observation period (on Sep. 23, 2007). A Big Earth Data Platform for Three Poles, doi:10.3972/water973.0193.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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