A Big Earth Data Platform for Three Poles

**HiWATER: Simultaneous observation dataset of land surface temperature in the lower of Heihe River Basin on Aug. 01, 2014**

1、Description

The aim of the simultaneous observation of land surface temperature is obtaining the land surface temperature for different kinds of underlying surface, including the lager areas of homogeneous vegetation with high coverage, water, and concrete floor, while the thermal imager go into the experimental areas of the low reaches. All the land surface temperature data will be used for validation of the retrieved land surface temperature from thermal imager and the analysis of the scale effect of the land surface temperature, and finally serve for the validation of the plausibility checks of the surface temperature product from remote sensing.
1. Observation time
On 1 August, 2014
2. Observation samples
Three field samples were chosen in the fly zone, which were large areas of homogeneous vegetation (with high coverage), water, and concrete floor.
3. Observation method
Surface temperature values were observed continuously for each sample using handheld infrared thermometers during the imager went into the flying area.
4. Instrument parameters and calibration
The field of view of the handheld infrared thermometer is one degree and the emissivity was assumed to be 0.95. All instruments were calibrated on 31 July, 2014 using a black body.
5. Data storage
All the observation data were stored in an excel.

2、Keywords

Theme：Soil,Thermal imager,Soil temperature,Remote Sensing Technology
Discipline：Terrestrial Surface,Remote Sensing Technology
Places：Heihe River Basin, the natural oasis eco-hydrology experimental area in the lower reaches
Time：2014, 2014-08-01

3、Data details

1.Scale：None

2.Projection：4326

3.Filesize：0.46MB

4.Data format：文本

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：42.05 | - |
| west：101.05 | - | east：101.55 |
| - | south：41.95 | - |

5、Time frame:2018-11-22 10:49:24+00:00--2018-11-22 10:49:24+00:00

6、Reference method

References to data:

MA Mingguo. HiWATER: Simultaneous observation dataset of land surface temperature in the lower of Heihe River Basin on Aug. 01, 2014. A Big Earth Data Platform for Three Poles, doi:10.3972/hiwater.269.2015.db2015

References to articles:

7、Supporting project information

Heihe Watershed Allied Telemetry Experimental Research (HiWATER)

8、Data resource provider

name: MA Mingguo
unit: Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences
email: mmg@lzb.ac.cn