### LSTC dataset: Land Surface Temperature in China dataset

1. **Dataset information**

***Dataset name:*** LSTC: Land Surface Temperature in China

***Content of the data set:***

The data set consists of 2 files:

1) 00\_Metadata for LSTC.docx: this file;

2) 01\_LSTC.zip: it contains data of LSTC.it contains 15 folders (one for each year), each of which has 12 images (one scene per month). Each phase consists of two files, including \*.TIF (LSTC image) and \*.TFW (TIFF image coordinate information).

***Latest version:*** Version 1.1 (November 2019)

1. **Brief introduction:**

The LSTC dataset contains land surface temperature data for China (about 9.6 million square kilometers of land) during the period of 2003-2017, in Celsius, in monthly temporal and 5600 m spatial resolution.

It is produced by combing MODIS daily data(MOD11C1 and MYD11C1), monthly data(MOD11C3 and MYD11C3) and meteorological station data to reconstruct real LST under cloud coverage in monthly LST images, and then a regression analysis model is constructed to further improve accuracy in six natural subregions with different climatic conditions. The accuracy analysis show that the reconstruct result is closely correlated with the in-situ measurements, the average RMSE is 1.39 °C, the MAE is 1.30 °C and R2 is 0.97.

1. **Coordinate projection information**

Projected Coordinate System: Albers\_Conic\_Equal\_Area

Projection: Albers

false\_easting: 0.00000000

false\_northing: 0.00000000

central\_meridian: 105.00000000

standard\_parallel\_1: 25.00000000

standard\_parallel\_2: 47.00000000

latitude\_of\_origin: 0.00000000

Linear Unit: Meter

Geographic Coordinate System: GCS\_WGS\_1984

Unit: Celsius

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