A Big Earth Data Platform for Three Poles

**Land Surface Temperature (LST) Monthly/Day Dataset (V1.0) based on AVHRR brightness temperature (BT) (0.05°×0.05°) and MYD21A1 LST products (0.01°×0.01°) in Qilian Mountain Area**

1、Description

This dataset contains monthly 0.05°×0.05° (1982, 1985, 1990, 1995, and 2000), 0.01°×0.01° (2005, 2010, 2015, 2017 and 2018), and daily 0.01°×0.01° (2018) LST products in Qilian Mountain Area. The dataset was produced based on SW algorithm by AVHRR BT from thermal infrared channels (CH4: 10.5µm to 11.3µm; CH5: 11.5µm to 12.5µm) at a resolution of 0.05°, MYD21A1 LST products at a resolution of 0.01° along with some auxiliary datasets. The auxiliary datasets include IGBP land cover type, AVHRR NDVI products, Modern Era Retrospective-Analysis for Research and Applications-2 (MERRA-2) reanalysis data, ASTER GED, Lat/Lon and the Julian Day information.

2、Keywords

Theme：MODIS,Atmosphere Remote Sensing,land surface temperature  
Discipline：Atmosphere,Others  
Places：Qilian Mountain Area  
Time：1982; 1985; 1990; 1995; 2000; 2005; 2010; 2015; 2017;

3、Data details

1.Scale：None

2.Projection：WGS84

3.Filesize：6441.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：45.0 | - |
| west：89.0 | - | east：107.0 |
| - | south：34.0 | - |

5、Time frame:1982-01-08 00:00:00+00:00--2019-01-07 11:59:59+00:00

6、Reference method

References to data:

LI Hua. Land Surface Temperature (LST) Monthly/Day Dataset (V1.0) based on AVHRR brightness temperature (BT) (0.05°×0.05°) and MYD21A1 LST products (0.01°×0.01°) in Qilian Mountain Area. A Big Earth Data Platform for Three Poles, doi:10.11888/Meteoro.tpdc.2702732019

References to articles:

Li, H., Sun, D.L., Yu, Y.Y., Wang, H.Y., Liu, Y.L., Liu, Q.H., Du, Y.M., Wang, H.S., & Cao, B. (2014). Evaluation of the VIIRS and MODIS LST products in an arid area of Northwest China. Remote Sensing of Environment, 142, 111-121. doi:10.1016/j.rse.2013.11.014.

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

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