A Big Earth Data Platform for Three Poles

**The NPP products of MODIS in Sanjiangyuan (1985-2015)**

1、Description

The data set contains NPP products data produced by the maximum synthesis method of the three source regions of the Yellow River, the Yangtze River and the Lancang River. The data of remote sensing products MOD13Q1, MOD17A2, and MOD17A2H are available on the NASA website (http://modis.gsfc.nasa.gov/). The MOD13Q1 product is a 16-d synthetic product with a resolution of 250 m. The MOD17A2 and MOD17A2H product data are 8-d synthetic products, the resolution of MOD17A2 is 1 000 m, and the resolution of MOD17A2H is 500 m. The final synthetic NPP product of MODIS has a resolution of 1 km.
The downloaded MOD13Q1, MOD17A2, and MOD17A2H remote sensing data products are in HDF format. The data have been processed by atmospheric correction, radiation correction, geometric correction, and cloud removal. 1) MRT projection conversion. Convert the format and projection of the downloaded data product, convert the HDF format to TIFF format, convert the projection to the UTM projection, and output NDVI with a resolution of 250 m, EVI with a resolution 250 m, and PSNnet with resolutions of 1 000 m and 500 m. 2) MVC maximum synthesis. Synthesize NDVI, EVI, and PSNnet synchronized with the ground measured data by the maximum value to obtain values corresponding to the measured data. The maximum synthesis method can effectively reduce the effects of clouds, the atmosphere, and solar elevation angles. 3) NPP annual value generated from the NASA-CASA model.

2、Keywords

Theme：NPP, 净初级生产力, MODIS
Discipline：Geographic Sciences
Places：source region of the Lancang River, source region of the Yellow River, Three-River-Source National Park, Three Rivers Source, source region of the Yangtze River
Time：2010, 2000, 2015, 2005,

3、Data details

1.Scale：None

2.Projection：None

3.Filesize：20.0MB

4.Data format：TIFF

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：37.38 | - |
| west：89.15 | - | east：102.58 |
| - | south：30.79 | - |

5、Time frame:1985-01-17 16:00:00+00:00--2016-01-16 16:00:00+00:00

6、Reference method

References to data:

Kamel Didan\*, Armando Barreto Munoz, Ramon Solano, Alfredo Huete. The NPP products of MODIS in Sanjiangyuan (1985-2015). A Big Earth Data Platform for Three Poles, doi:10.11888/Ecolo.tpdc.2705552018

References to articles:

7、Supporting project information

8、Data resource provider

name: Kamel Didan\*, Armando Barreto Munoz, Ramon Solano, Alfredo Huete
unit: The University of Arizona
email: didan@email.arizona.edu