Upper Yangtze River Scientific Data Center

**500m Photosynthetic Active Radiation data based on MODIS MCD18C2 in Southwest China (2002-2021)**

1、Description

The data set includes 500m of light and effective radiation data from 2002 to 2021. All data are from Google Earth Engine. MCD18C2 Version 6.1 is a Level 3 product of the Moderate Resolution Imaging Spectrometer (MODIS) Terra and Aqua Joint Photosynthetic Effective Radiation (PAR) grid, which produces a resolution of 0.05 degrees (5600 meters at the equator) every day, and is estimated to produce PAR every 3 hours. PAR is the incident solar radiation of visible light (400-700 nm), and is an important variable in the land surface model to solve various scientific and application problems. The MCD18 product is based on a prototype algorithm, which uses the multi-temporal characteristics of MODIS data to derive the surface reflectance, and then uses the Look-up Table (LUT) method to calculate the incident PAR.

2、Keywords

Theme：Solar radiation,Remote Sensing Technology
Discipline：Remote Sensing Technology
Places：Southwest China
Time：2002-2021

3、Data details

1.Scale：500

2.Projection：WGS84

3.Filesize：424.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：35.0 | - |
| west：96.0 | - | east：113.0 |
| - | south：20.5 | - |

5、Time frame:2001-12-31 16:00:00+00:00--2022-12-31 03:59:59+00:00

6、Reference method

References to data:

WANG Dongdong . 500m Photosynthetic Active Radiation data based on MODIS MCD18C2 in Southwest China (2002-2021). Upper Yangtze River Scientific Data Center, 2023

References to articles:

Wang, D. (2021). MODIS/Terra+Aqua Photosynthetically Active Radiation Daily/3-Hour L3 Global 0.05Deg CMG V061 [Data set]. NASA EOSDIS Land Processes DAAC. Accessed 2023-03-06 from https://doi.org/10.5067/MODIS/MCD18C2.061

7、Supporting project information

8、Data resource provider

name: WANG Dongdong
unit: Department of Geographical Sciences, University of Maryland
email: ddwang@umd.edu