A Big Earth Data Platform for Three Poles

**Landsat-based continuous monthly 30m LAI Dataset in Qilian mountain area in 2021 (V1.0)**

1、Description

Leaf Area Index (LAI) is defined as half of the total Leaf Area within the unit projected surface Area, and is one of the core parameters used to describe vegetation. LAI controls many biological and physical processes of vegetation, such as photosynthesis, respiration, transpiration, carbon cycle and precipitation interception, and meanwhile provides quantitative information for the initial energy exchange on the surface of vegetation canopy. LAI is a very important parameter to study the structure and function of vegetation ecosystem. This data set includes the monthly synthesis of 30m LAI products in Qilian mountain area in 2021. Max value composition (MVC) method was used to synthesize monthly LAI products on the surface using the reflectivity data of Landsat 8 and sentinel 2 channels from Red and NIR channels.

2、Keywords

Theme：Near infrared remote sensing,LAI,Remote Sensing Technology,Visible remote sensing,Terrestrial Surface Remote Sensing
Discipline：Terrestrial Surface,Remote Sensing Technology
Places：Qilian Mountain Area
Time：January 1, 2021 to December 31, 2021

3、Data details

1.Scale：None

2.Projection：

3.Filesize：18013.0MB

4.Data format：None

4、Space scope

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

5、Time frame:2020-12-31 16:00:00+00:00--2021-12-30 16:00:00+00:00

6、Reference method

References to data:

ZHONG Bo, LI Yi, WU Junjun . Landsat-based continuous monthly 30m LAI Dataset in Qilian mountain area in 2021 (V1.0). A Big Earth Data Platform for Three Poles, doi:10.11888/Terre.tpdc.2726622022

References to articles:

Zhao J., et al. Estimating fractional vegetation cover from leaf area index and clumping index based on the gap probability theory. International Journal of Applied Earth Observation and Geoinformation 90, 102-112 (2020).

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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