Upper Yangtze River Scientific Data Center

**SMOS L3 Vegetation Optical Depth data set in the upper reaches of the Yangtze River (2010-2022)**

1、Description

This dataset is created using the τ-ω The model is obtained by combining TB inversion obtained by microwave imaging radiometer (MIRAS) of European Space Agency (ESA) SMOS mission in H and V polarization L-band (1.4 GHz). Apply threshold and 2-sigma standard on TB to filter invalid data. The RFI flag based on the modeling method of these interferences is used to shield the polluted pixels. Because the resolution of SMOS data is relatively coarse (between 25 and 60 kilometers), the soil and vegetation within a pixel are uneven. TB per pixel is the weighted total scattering of each vegetation and soil type coverage. The data has a spatial resolution of 25 - km and a temporal resolution of 1 day.

2、Keywords

Theme：Terrestrial Surface Remote Sensing,Vegetation optical depth (VOD)
Discipline：Terrestrial Surface
Places：Yangtze
Time：2010-2022

3、Data details

1.Scale：None

2.Projection：

3.Filesize：120.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：36.5 | - |
| west：89.0 | - | east：112.0 |
| - | south：24.0 | - |

5、Time frame:2010-01-16 16:00:00+00:00--2022-08-31 16:00:00+00:00

6、Reference method

References to data:

BITAR Al Ahmad . SMOS L3 Vegetation Optical Depth data set in the upper reaches of the Yangtze River (2010-2022). Upper Yangtze River Scientific Data Center, 2022

References to articles:

Al Bitar, A.; Mialon, A.; Kerr, Y.H.; Cabot, F.; Richaume, P.; Jacquette, E.; Quesney, A.; Mahmoodi, A.; Tarot, S.; Parrens, M.; et al. The global SMOS Level 3 daily soil moisture and brightness temperature maps. Earth Syst. Sci. Data 2017, 9, 293–315.

7、Supporting project information

8、Data resource provider

name: BITAR Al Ahmad
unit: Université de Toulouse
email: Al-Bitar@lingua.uni-frankfurt.de