Upper Yangtze River Scientific Data Center

**Soil moisture data of 25KM-SMOS in the upper reaches of Yangtze River in China (2010-2016)**

1、Description

The SMOS INRA-CESBIO (SMOS-IC) algorithm was designed by INRA (National Institute of Agronomy) and CESBIO (Biospace Research Center) to perform global retrieval of SM and L-VOD. SMOS-IC is based on the two parameter inversion of the L-MEB model defined by Wigneron et al. (2017), and treats pixels as homogeneous. Therefore, the design basis of SMOS-IC is the same as that of Level 2 SM algorithm, but some simplifications are used. Specifically, SMOS-IC does not consider corrections related to processing retrieval with heterogeneous land cover areas (forest cover areas), antenna patterns, and complex SMOS view geometry. Therefore, one of the main objectives of the SMOS-IC product is to be independent of the auxiliary data as much as possible, so as to be more robust and less affected by the potential uncertainties in the above corrections. The SMOS-IC algorithm and data set are described in Fernandez Moran et al. (2017). The available soil moisture product is the second edition, which is provided in the 25km EASEv2 grid and is in the netcdf format. This product cuts data on the basis of metadata. The cut area is the upper reaches of the Yangtze River in TIFF format.

2、Keywords

Theme：Soil,Surface Freeze-thaw Cycle/state Remote Sensing,Soil moisture,microwave remote sensing,Terrestrial Surface Remote Sensing  
Discipline：Terrestrial Surface,Cryosphere  
Places：Southwest China  
Time：2002-2022

3、Data details

1.Scale：None

2.Projection：

3.Filesize：15360.0MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：36.0 | - |
| west：90.0 | - | east：112.0 |
| - | south：24.0 | - |

5、Time frame:None--None

6、Reference method

References to data:

NASA EOSDIS LP DAAC. Soil moisture data of 25KM-SMOS in the upper reaches of Yangtze River in China (2010-2016). Upper Yangtze River Scientific Data Center, 2022

References to articles:

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Wigneron, J.-P., Li, X., Frappart F., Fan L., Al-Yaari A., De Lannoy G., Liu X., Wang M., Le Masson E., Moisy C., SMOS-IC data record of soil moisture and L-VOD: historical development, applications and perspectives, Remote Sens. Env., 254, 112238, https://doi.org/10.1016/j.rse.2020.112238, 202

7、Supporting project information

8、Data resource provider

name: NASA EOSDIS LP DAAC  
unit: NASA EOSDIS LP DAAC  
email: none