Upper Yangtze River Scientific Data Center

**Daily Soil Moisture Data Set in Southwest China Based on the MWRI Data of FY-3B Microwave Imager of Fengyun Satellite (2010-2019)**

1、Description

This data set is a global daily scale surface soil moisture data set covering 10 years (2010-2019), with a resolution of 36 km, using the EASE-Glid2 projection coordinate system, and the data unit is m3/m3. The data set uses the soil moisture neural network inversion algorithm developed by Yao et al. (20172021) to transfer the advantages of SMAP to FY-3B/MWRI, and uses the artificial neural network method to train SMAP standard soil moisture products, With the bright temperature of FY-3B/MWRI as the input, the long-term soil moisture data will be output finally. The precision of soil moisture is close to SMAP, reaching about 5%. (Verification accuracy of 14 dense observation stations worldwide).

2、Keywords

Theme：Soil,Soil water content,Microwave Remote Sensing,Remote Sensing Technology,Hydrology
Discipline：Terrestrial Surface,Others,Remote Sensing Technology
Places：World, Southwest China
Time：2010-2019

3、Data details

1.Scale：None

2.Projection：

3.Filesize：9462.0MB

4.Data format：None

4、Space scope

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

5、Time frame:None--None

6、Reference method

References to data:

WU Shengli , YAO Panpan, LU Hui , SHI Jiancheng, ZHAO Tianjie. Daily Soil Moisture Data Set in Southwest China Based on the MWRI Data of FY-3B Microwave Imager of Fengyun Satellite (2010-2019). Upper Yangtze River Scientific Data Center, doi:https://doi.org/10.1038/s41597-021-00925-82022

References to articles:

1. Yao, P.P., Lu, H., Zhao, T.J., Wu, S.L., Shi, J.C., Yang K., Cosh, M.H., Zhang, P. (2022). A global daily soil moisture dataset derived from Chinese FengYun-3B Microwave Radiation Imager (MWRI) (2010-2019) . Scientific Data. (Under Review)( 查看 | Bibtex格式)

2. Yao, P.P., Lu, H., Shi, J.C., Zhao, T.J., Yang K., Cosh, M.H., Gianotti, D.J.S., & Entekhabi, D. (2021). A long term global daily soil moisture dataset derived from AMSR-E and AMSR2 (2002-2019). Scientific Data, 8, 143 (2021). https://doi.org/10.1038/s41597-021-00925-8( 查看 | Bibtex格式)

3. Yao, P.P., Shi, J.C., Zhao, T.J., Lu, H. & Al-Yaari, A. (2017). Rebuilding Long Time Series Global Soil Moisture Products Using the Neural Network Adopting the Microwave Vegetation Index. Remote Sensing 9(1), 35.( 查看 | Bibtex格式)

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8、Data resource provider

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