A Big Earth Data Platform for Three Poles

**Data products of mixed soil moisture of the Tibetan Plateau (2008-2016)**

1、Description

The data products of mixed soil moisture of the Tibetan Plateau utilize remote sensing observation, in situ measurement and model simulation techniques. In situ soil moisture (SM) observation combines the classification of the Tibetan Plateau climate zone and is used to generate in situ measurements of SM climatology at plateau scales. The resulting in situ SM climatology of the Tibetan Plateau scale is used to scale the SM data simulated by the model, which are then used to scale the SM satellite observations. The climatological-scale satellites and model-simulated SMs are then objectively mixed by applying triple configuration and least square matching. The final mixed SM can replicate SM dynamics in different climate zones, from subhumid areas to semiarid and arid regions of the Tibetan Plateau.
- Time resolution: day, starting from 01/05/2008
- Spatial resolution: 0.25° × 0.25°
- Data set size: 61 × 121 × 975
- Unit: cm^3 cm^-3
The data quality is open to assessment.

2、Keywords

Theme：Soil,Soil moisture/Water content
Discipline：Terrestrial Surface
Places：Tibetan Plateau
Time：2008-2016

3、Data details

1.Scale：None

2.Projection：

3.Filesize：22.0MB

4.Data format：\*.mat

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：38.0 | - |
| west：73.0 | - | east：104.0 |
| - | south：28.0 | - |

5、Time frame:2008-05-10 00:00:00+00:00--2016-11-09 00:00:00+00:00

6、Reference method

References to data:

ZENG Yijian. Data products of mixed soil moisture of the Tibetan Plateau (2008-2016). A Big Earth Data Platform for Three Poles, doi:10.11888/Soil.tpdc.2700882018

References to articles:

Zeng, Y.J., Su, Z.B., van der Velde, R., Wang, L.C., Xu, K., Wang, X., &Wen, J. (2016). Blending Satellite Observed, Model Simulated, and in Situ Measured Soil Moisture over Tibetan Plateau. Remote Sensing, 8(3), 268.

Su, Z.B., Wen, J., Dente, L., van der Velde, R., Wang, L.C., Ma, Y.M., Yang, K., & Hu, Z.H. (2011). The Tibetan Plateau observatory of plateau scale soil moisture and soil temperature (Tibet-Obs) for quantifying uncertainties in coarse resolution satellite and model products. Hydrology and Earth System Sciences, 15(7), 2303-2316.

7、Supporting project information

8、Data resource provider

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