A Big Earth Data Platform for Three Poles

**A 10-year surface soil moisture dataset produced based on in situ measurements collected from the Tibet-Obs (2009-2019)**

1、Description

The Tibet-Obs established in 2008 consists of three regional-scale soil moisture (SM) monitoring networks, i.e. the Maqu, Naqu, and Ngari (including Ali and Shiquanhe) networks. This surface SM dataset includes the original 15-min in situ measurements collected at a depth of 5 cm by multiple SM monitoring sites of all the networks, and the spatially upscaled SM records produced for the Maqu and Shiquanhe networks.

2、Keywords

Theme：soil moisture,Soil,Hydrology
Discipline：Terrestrial Surface
Places：Shiquanhe, Maqu, Qinghai-Tibet Plateau
Time：2009-2019

3、Data details

1.Scale：None

2.Projection：

3.Filesize：101.23MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：34.5 | - |
| west：79.25 | - | east：102.75 |
| - | south：31.2 | - |

5、Time frame:2009-05-14 16:00:00+00:00--2019-08-30 16:00:00+00:00

6、Reference method

References to data:

ZHENG Donghai, WEN Jun, SU Zhongbo, WANG Xin, ZHANG Pei, MA Yaoming, WANG Zuoliang. A 10-year surface soil moisture dataset produced based on in situ measurements collected from the Tibet-Obs (2009-2019). A Big Earth Data Platform for Three Poles, doi:10.4121/12763700.v72021

References to articles:

Chen, Y., Yang, K., Qin, J., Cui, Q., Lu, H., La, Z., Han, M., & Tang, W. (2017). Evaluation of SMAP, SMOS, and AMSR2 soil moisture retrievals against observations from two networks on the Tibetan Plateau. Journal of Geophysical Research: Atmospheres, 122(11), 5780-5792.

Zhang, P., Zheng, D., van der Velde, R., Wen, J., Zeng, Y., Wang, X., Wang, Z., Chen, J., and Su, Z.: Status of the Tibetan Plateau observatory (Tibet-Obs) and a 10-year (2009–2019) surface soil moisture dataset, Earth Syst. Sci. Data, 13, 3075–3102, https://doi.org/10.5194/essd-13-3075-2021, 2021.

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

name: MA Yaoming
unit: Institute of Tibetan Plateau Research, Chinese Academy of Sciences
email: ymma@itpcas.ac.cn

name: WEN Jun
unit:
email: jwen@cuit.edu.cn

name: SU Zhongbo
unit:
email: z.su@utwente.nl

name: ZENG Yijian
unit:
email: y.zeng@utwente.nl

name: ZHANG Pei
unit:
email: p.zhang@utwente.nl

name: ZHENG Donghai
unit:
email: zhengd@itpcas.ac.cn

name: WANG Xin
unit:
email: xinwang@lzb.ac.cn

name: WANG Zuoliang
unit:
email: zuoliangwang@lzb.ac.cn