

Interactive comment on “A fine-resolution soil moisture dataset for China in 2002–2018” by Xiangjin Meng et al.

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Thank you very much for your good comments and suggestions. This research was under the support of China's national key research and development program "Global Meteorological Satellite Remote Sensing Dynamic Monitoring, Analysis Technology and Quantitative Application Methods and Platform Research" and "Multi-source Meteorological Data Fusion Technology Research and Product Development". The purpose is to provide a set of soil moisture data sets with high spatial and temporal resolution. The development of the data set considered a variety of factors and overcome many difficulties. There are some differences in the soil moisture retrieved by different sensors, mainly due to the band settings and observation angles of different satellite instruments. The lower the frequency, the deeper the depth of the observed soil

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moisture information. In addition, different inversion algorithms have different considerations of land surface temperature and vegetation and rainfall, which will also lead to inconsistent inversion results. I have reproduced the data set and the new version will be uploaded soon. The revised manuscript also highlighted your suggestions. Considering that the instrument frequency, incident angle, and observation time are as consistent as possible, we try to absorb the advantages of different coarse-resolution soil moisture data sets, perform downscaling inversion, and perform verification and spatio-temporal analysis. Many users, especially in China, have given high evaluations to the high-resolution downscaling data set we provide. Thanks again.

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